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QSS-33 Training Material for Service Personnel

For both Trainers and Trainees

This material is mainly for trainees who have completed the initial training course for the QSS-28, 29, 30, 31 or 32. Also, the material should be utilized in the assembly training with the actual use of the QSS-33.

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Service Skills Development and Training Department

Asterisk (*) in This Training Material

Certain contents described in the Japanese version of the training material is irrelevant to the English version. This material therefore omits these contents, and indicates this using the asterisk.

33_1

Chapter 1
Specifications

Explanation

•There is no additional information.

1000

33_1

The point of this chapter

Key points

- Study the specifications of the machine.

  Processing capacity
  Main options
  Spec of PC

Upon completion of the lesson, you will be able to:

- Understand what you can do with the machine and explain it to users.
- Understand processable media and format and explain those to users.
- Understand the standard parts and options and explain it to users.
- Understand the spec of built-in PC.

How to proceed the training

Explain, using the Training materials.

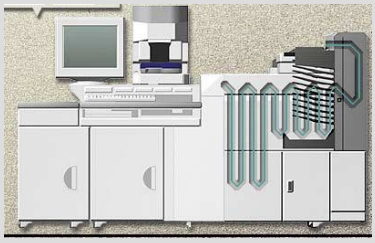
Refer to the “Specifications” for details.

1010

33_1

Concept

- The QSS-33 is a succeeding model of the QSS-30 regarding the processing capacity. It is compatible with the scanner of the QSS-32 (S-2).
- Improved operationality of the Edit mode as well as (that of) the QSS-32. (The issue of the conventional QSS models is improved)
- Improve the general image quality such as the resolution for film scanning, image processing, scanner performance, etc.



Note

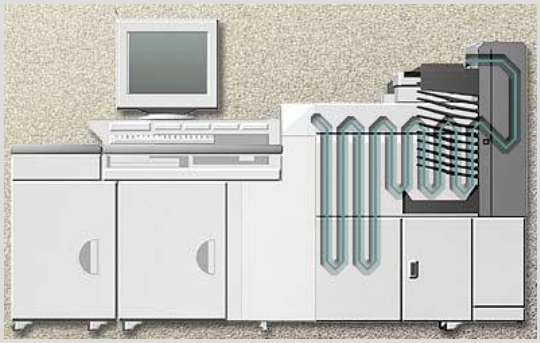
- Processing capacity of QSS-3001
  89 x 127 935 prints/hour
- Processing capacity of QSS-3011
  89 x 127 1150 prints/hour

1012

33_1

Overview (The Stand Alone Printer)

- This is a stand alone printer that does not use the scanner of the QSS-33 (S-2). The printer is for outputting the data to the media.
- It is also possible to output data from various application by using the printer driver.

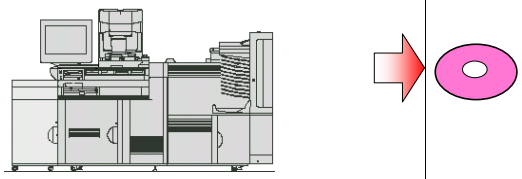
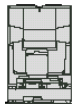
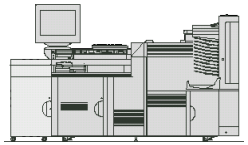
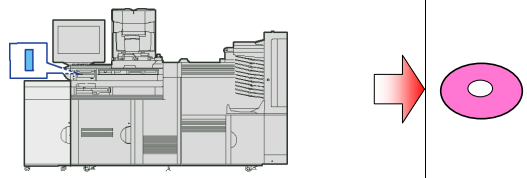
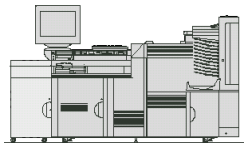
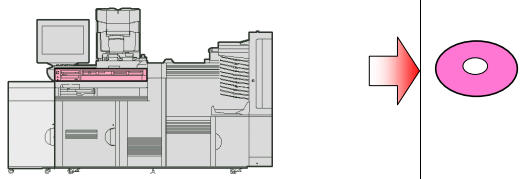
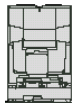
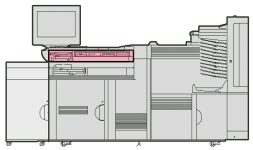
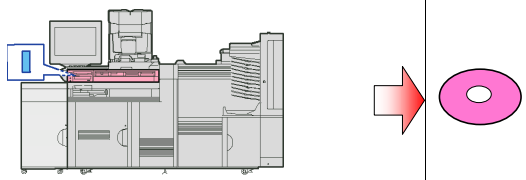
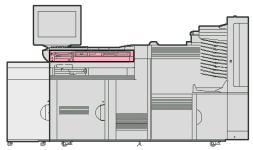
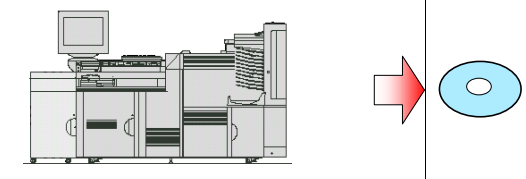
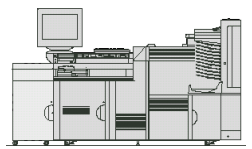


Note

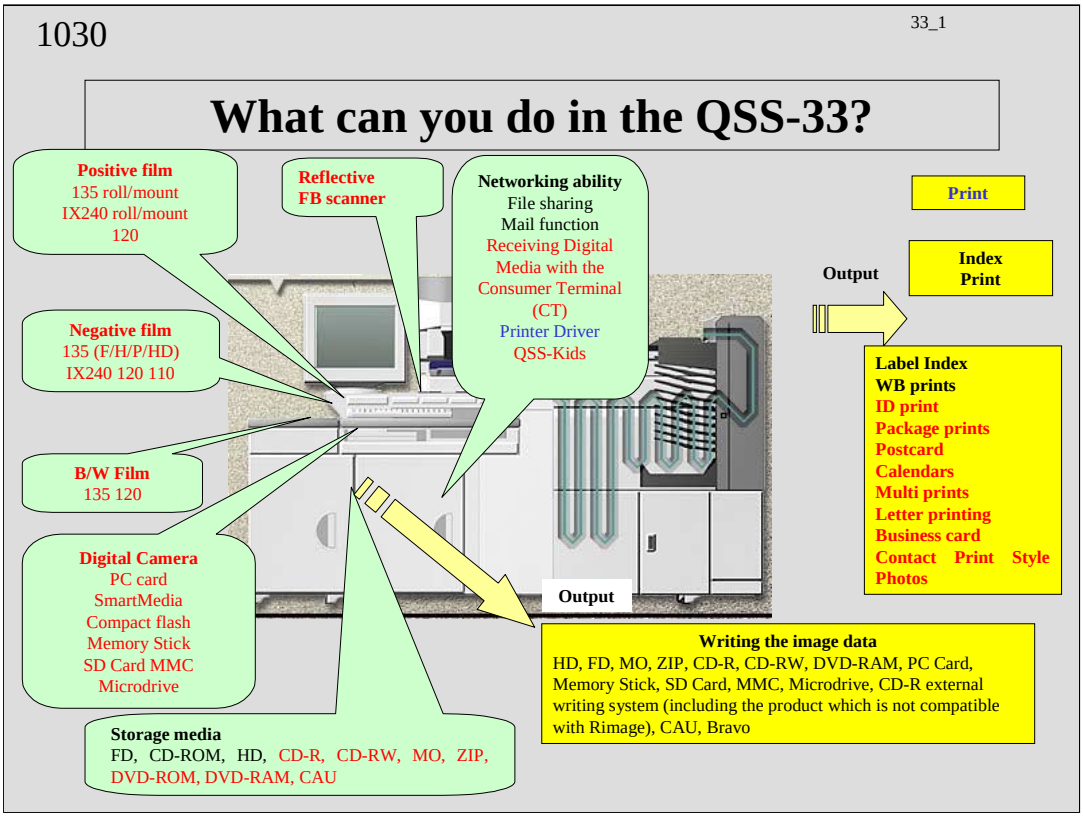
- Equipped personal computer is the same as the standard PC for the QSS-33.
- The QSS Software is exclusively for the Stand-alone Printer.

QSS-33型のシステム名及び処理能力

キャパシティーブースターA

システム名	処理仕様	処理能力	組み合わせ図	システムプログラム	スキャナー部	キャパシティーブースターA	プリンター/プロセサー部	機械のポイント
QSS-3301 Digital	標準 J SM EX II	(フィルム) 89×127: 900枚/時 (メディア) 89×127: 900枚/時			 S-2	–	 LPP-1300	★以下の機種で構成される。 フィルム、記憶メディアからのプリント、データ保存ができる。 ・プリンター/プロセサー部 ・スキャナー部 ★パソコンの処理能力は標準。 ★INITIAL DATA1,2,3,4で構成される。
QSS-3302 Digital	標準 J SM EX II	(フィルム) 89×127: 1267枚/時 (メディア) 89×127: 1267枚/時			 S-2		 LPP-1300	★以下の機種で構成される。 記憶メディアからのプリント、データ保存ができる。 ・プリンター/プロセサー部 ★スキャナー部の処理能力が高い。 キャパシティーブースターAを取り付けることで処理能力がアップする。 ★パソコンの処理能力は標準。 ★INITIAL DATA1,2,3,4で構成される。
QSS-3311 Digital	標準 SM	(フィルム) 89×127: 900枚/時 (メディア) 89×127: 900枚/時			 S-2	–	 LPP-1300	★以下の機種で構成される。 フィルム、記憶メディアからのプリント、データ保存ができる。 ・プリンター/プロセサー部 ・スキャナー部 ★パソコンの処理能力が高い。 ★INITIAL DATA1,2,3,4で構成される。
QSS-3312 Digital	標準 SM	(フィルム) 89×127: 1267枚/時 (メディア) 89×127: 1267枚/時			 S-2		 LPP-1300	★以下の機種で構成される。 フィルム、記憶メディアからのプリント、データ保存ができる。 ・プリンター/プロセサー部 ・スキャナー部 ★スキャナー部の処理能力が高い。 キャパシティーブースターAを取り付けることで処理能力がアップする。 ★パソコンの処理能力が高い。 ★INITIAL DATA1,2,3,4で構成される。
QSS-3302 PRO Digital	標準 SM	(メディア) 89×127: 1267枚/時			–	–	 LPP-1300	★以下の機種で構成される。 記憶メディアからのプリント、データ保存ができる。 ・プリンター/プロセサー部 ★パソコンの処理能力は標準。 ★INITIAL DATA1,2,3で構成される。

説明
・フィルムからの処理能力のプリント条件(インデックスプリント有り、パノラマ混在無し) 135F-24EX 24コマ撮影
・デジタルカメラからの処理能力のプリント条件250万画素デジタルカメラ 32MBスマートメディア (HQモード) 24コマ撮影 1712×1368Pixel インデックスなし デジカメ補正あり JPEG画像サイズ 490から560KB
・システムプログラムは(QSS-33型)、(QSS-33型 PRO)でそれぞれ個別にあります。

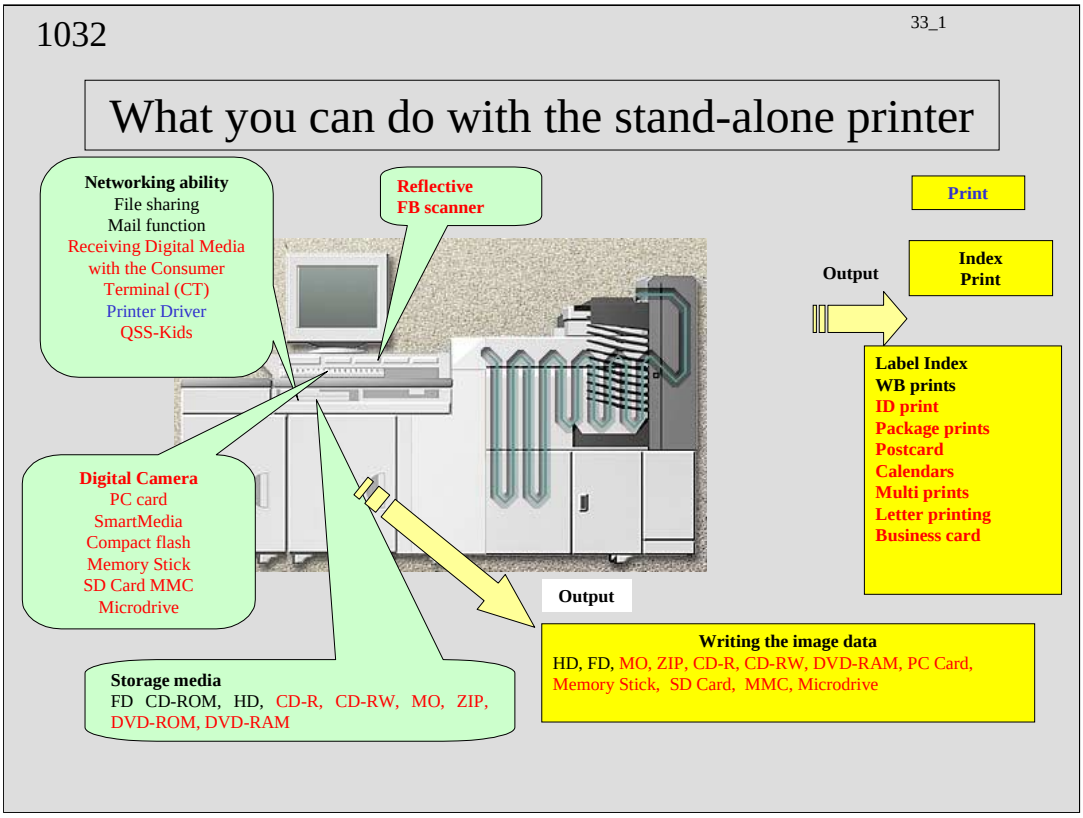


Explanation

- The image can be stored to one CD until the capacity of media is full.
  (So, the number of negatives to be stored is not decided.)
- DCP cannot be connected.
- It is not possible to install the EZ-mall II.
- The Memory Stick, SD Card, MMC and Microdrive are available with Five slots card reader.
  As for the xD-Picture Card, the PC card adaptor or CompactFlash adaptor is necessary.
- Refer to the [Usable media and file types] in [Getting Started] for details.

Note

- Standard: Black letter
  Function of options: Red letter



Note

- The explanation of the Note is the same as the QSS-33.

1040

33_1

Usable media 1

Types of media	Input	Output	Additional writing	Description
FD	x	x	x	Standard equipment
CD-ROM	x	-	-	Either the CD-ROM drive (standard) or the CD-R/RW drive is necessary.
CD-R	x	x	-	CD-R/RW drive is necessary.
CD-RW	x	x	-	
MO	x	x	x	MO drive is necessary.
ZIP	x	x	x	ZIP drive is necessary.
DVD-RAM	x	x	x	DVD-RAM drive is necessary.
DVD-ROM	x	-	-	
DVD-R	-	-	-	
DVD-RW	-	-	-	
Reflective	x	-	-	FB scanner (procured parts at customer's site) is necessary.

x: possible

***Explain the spec of each drive, etc separately.**

Explanation

- 12cm CD's and 8cm CD's are supported.Business card CD's and other uniquely shaped CD's are also supported.
- It is now possible to write in multiple sessions.(except CD-R/RW)

Note

- The media capacity of CD is different depending on a maker.
- Refer to the [Usable media and file types] in [Getting Started] for details.

1050

33_1

Usable media 2

Types of media	Input	Output	Additional writing	Description
CompactFlash (Type1, TypeII)	x	x	x	Five Slots Card Reader is necessary. x :Possible *1: PC card adaptor is necessary.
SmartMedia	x	x	x	
PC card	x	x	x	
Memory Stick	x	x	x	
SD Card	x	x	x	
MMC (Multi media card)	x	x	x	
Microdrive	x	x	x	
xD-Picture Card	*1	*1	*1	
Memory Stick PRO	x	x	x	

***Explain the spec of each drive, etc separately.**

Explanation

- As for the digital camera media, there is the media with security.
  Some of them cannot process the copyright protected data.
- Even if the media is with security, it can process the data except the copyright protected data.
- It is now possible to write in multiple sessions.

Note

- The copyright protected data is the encrypted data, and it cannot be created and edited.
- Follow the attached Operator's Manual for handling the PC card adaptor.
- Refer to the [Usable media and file types] in [Getting Started] for details.

1060

33_1

Processable Format

	Image format
Input	**Exif 1.0, 2.1 (Thumbnail can be used in distinction from JPEG.)** **JPEG (includes Progressive JPEG, CMYK Format)** **FlashPix** **Bitmap (non-compressed)** **PSD (includes Photo Shop Document, CMYK Format)** **PCD (Photo CD)** **PCX, DCX** **TGA** **TIFF (RGB non-compressed)**
Output	**JPEG (except Progressive, CMYK Format)** **FlashPix** **Bitmap (non-compressed)** **TIFF (RGB non-compressed)**

Explanation

- JPEG 2000 is not available.
- As for the input image format, in case of RGB, 8-bit gradation only is available.
  16-bit gradation or gray scale is not available.
- Media (Windows format) only is available.

Note

- Refer to the [Usable media and file types] in [Getting Started] for details.

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1070

33_1

DPOF and Exif

Functions supported by QSS		
Format	Contents of data	Function in the QSS side
DPOF	Date, Title, Image file name, Frame No., Comment, Image title	Front print
	Setting for the number of prints	Number of prints
	Cropping of the image	Print
Exif	Date	Front print
	Name of image input device maker	Distinguish between the data taken by the digital camera and other image data.

Explanation

- If there is a name of image input device maker in the Exif data, it is recognized as the image data from digital camera even if it is not the image data of a storage media except for the digital camera.

  As for the storage media except for the digital camera, if there is no Exif data or no name of image input device maker in the Exif data, it is recognized as the image data from normal media.
- If [Digital Image Auto Correction (Digital Camera)] is not used, remove a check for [Digital Image Auto Correction (Digital Camera)].

  The [Digital Image Auto Correction (Digital Camera)] setting can be carried out on the following displays.

  •Image file selection display

  •Print CH
- When saving image data taken by digital camera to normal media in the QSS, the name of image input device maker (Exif data) is overwritten from ‘maker name of camera’ to ‘Noritsu’.This disables [Digital Image Auto Correction (Digital Camera)] effective when reprinting.
- Refer to Chapter 3 [Front print] for the date of Exif data.

1080

33_1

Main options (Film carriers)

Types of carriers	Film type	Size	Description
135/240 AFC-II	Negative/Positive/Black&White/(Roll) Sepia/Black&White (orange base)	135F, H, P, HD IX240, 135FP, 135FPS	Minimum number of frames:2-frame
135 AFC-II	Negative/Positive/Black&White/(Roll) Sepia/Black&White (orange base)	135F, H, P, HD , 135FP, 135FPS	Minimum number of frames:2-frame
120 AFC-II	Negative/Positive/Black&White Sepia/Black&White (orange base)	6x4.5, 6x6, 6x7, 6x8, 6x9	Minimum advance length:43 mm (6 x 4.5 1 frame)
110 AFC-II	Negative	110	Minimum number of frames:3-frame
AMC-II MMC-II	Negative/Positive/Black&White/Sepia/Black&White (orange base)	135F, 135H, IX240	Length of mount 50 mm x 50 mm Thickness: 1.0 mm – 3.2 mm Glass mount is not available.

Show each AFC.

Explanation

- Refer to the Specifications for the part No.
- Explain, showing each AFC.
- 135/240 AFC-II became an option because media processing only is available.
- As for the 135/240 AFC-II, the R/W type and R type (2 types) are set as options.
- 1-frame (135F) scanning is not available with 135/240 AFC-II and 135 AFC-II.(Possible to process with the MMC-II / AMC-II)
- It is possible to process the Negative/Positive/Black&White/Sepia/Black&White (orange base) when using the MMC-II / AMC-II.
- Insert the AFC-IL or the 135AFC-II film from the rear end.

1085

33_1

Difference between AFC and AFC-II (1)

- The label is put on the AFC-II.
- As for the top cover, the place where the hinges are attached are different.
- The curl film setting roller is attached to the film catcher unit.

Explanation

- There is no additional information.

1086

33_1

Difference between AFC and AFC-II (2)

Description/Explanation
The R type and R/W type are set.
The monitoring interval of the perforation of 135/240 is shortened not to damage the film when a film jam occurs.
As for the 240, the detection plate of the VEI sensor is changed to detect immediately if the rotation of the spool stops.
The rewind sensor is added to the upper part of the rewind unit to detect a film jam when a film jam occurs in the rewind unit.
The DX sensor of 240 is moved to the insertion side to be able to detect the FID of the film rear end side.
The ready sensor is moved to the insertion side to detect the turn round perforation surely.
The shutter for the panorama film is added to avoid the strong light from the unexposed part of 135P.

Explanation

- To distinguish the R type from R/W type, open the AFC cover and see whether the read head is attached or not.

  Refer to the Service Manual [62150].

- Also, although this was not available initially, it has been possible to distinguish between the type R and the type R/W with the red round stickers on the upper part of the Magnetic Head Unit.

  Type R (with a red round sticker), Type R/W (without a red round sticker)

1087

33_1

Cautions when Dealing with MMC-II and AMC-II

The MMC-II and the AMC-II for QSS 31 or earlier QSS models and the MMC-II and the AMC-II for the QSS-32 and 33 series are not compatible due to their differences in 2 regards: The Shape of the Slot Section and (With or without) the Lens Unit.

MMC-II

Explanation

- There is no additional information.

1088

33_1

Trouble symptoms for AFC-II (1)

When the AFC for the conventional machines is attached to the QSS-32 or the QSS-33

AFC	Machine type	Processing	Description
135/240AFC, 135AFC, 120AFC, 110AFC, MMC, AMC	For the QSS-28/29/30/31	Not effective	[1401: Attach the Film Carrier.] appears, and it does not process.

When the 135/240 AFC-II for each machine is attached to the QSS-32 or the QSS-33

AFC	Machine type	Processing	Description
135/240 AFC-II	For QSS-28/31	Not effective	The effect of the DIGITAL ICE becomes weak because the lens unit is not attached.
	For QSS-29		
	For QSS-30	Not effective	An error [6309: Scanner change of light error] occurs because the diffuser is attached.

Note

- The 135 AFC-II is set as an option for the QSS-30/32/33.
- Refer to the [Processable film] in [Getting Started] for details of the processable film with AFC.

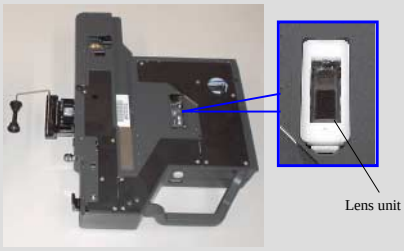
1089

33_1

Trouble symptoms for AFC-II (2)

When the AFC-II for each machine is attached to the QSS-32 or the QSS-33

AFC	Machine type	Processing	Description
135AFC-II, 120AFC-II, 110AFC-II MMC-II, AMC-II	For QSS-28/31	Not effective	The effect of the DIGITAL ICE becomes weak because the lens unit is not attached.
	For QSS-29		
	For QSS-30		



Explanation

- The lens unit is not attached to each AFC-II for the QSS-28/29/30/31.
  Also, as for the QSS-30 only, the diffuser for light diffusion is attached to get the image quality.
- The lens unit is attached to each AFC-II for the QSS-32 and the QSS-33.

Note

- The 135 AFC-II is set as an option for the QSS-30/32/33.

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1100

33_1

PC options

Name	Description/Explanation
SCSI card unit	Necessary when attaching the options such as MO, DVD, FB scanner for the A3 size, etc to the standard PC.
ZIP drive unit	Unit to save/read the image data to a ZIP
MO drive unit	Unit to save/read the image data to a MO
DVD-RAM drive unit	Used to save/read the image data to a DVD-RAM
Five slots card reader	Used to save/read the image data from PC card, CompactFlash, SmartMedia, SD Card, Memory Stick, MMC and Microdrive (USB connection)
CD-R/RW drive unit	Used to save/read the image data to the CD-R/RW
Expanded memory unit	The unit that processes the image data smoothly when processing the image data and using the Adobe Photoshop (Only for a standard computer)
Sound Blaster 4.1 Digital	The unit that beeps for a notification of the Error message or Attention

***The spec, etc is mentioned separately.**

Explanation

- You cannot use an option except above items.
- Refer to the Specifications for the part No.
- As for the high spec PC, the DVD-RAM drive unit is not set as an option.Also, CD-R/RW drive, five slots card reader, and FDD are standard equipments.

1115

33_1

PC options (Example of memory combination:standard PC)

Installed DIMM	PC-NRT-RS1
Standard (512MB)	**Available** **Attaching to the CHANNEL A (DIMM0) (256MB standard)** **CHANNEL A (DIMM1) (Not in use)** **Attaching to the CHANNEL B (DIMM0) (256MB standard)** **CHANNEL B (DIMM1) (Not in use)**
Option (1GB) Total: 1GB	**Available** **Attaching to the CHANNEL A (DIMM0) (256MB standard)** **Attaching to the CHANNEL A (DIMM1) (256MB option)** **Attaching to the CHANNEL B (DIMM0) (256MB standard)** **Attaching to the CHANNEL B (DIMM1) (256MB option)**

Note

- If you use in the other combination except above list, the movement is not guaranteed.Refer to the "ATX mother board, DIMM" of the PC Service Manual "PC-NRT-RS1".
- PC-NRT-RS1 has DIMM installed.
- PC-NRT-RS1 is not compatible with the DIMM that is 512MB or more.

1125

33_1

PC options (Example of the memory combinations:High spec PC)

Installed DIMM	PC-NRT-RS3
Standard (2GB)	**Available** **Attaching to CHANNEL A (DIMM0) (1GB standard)** **CHANNEL A (DIMM1) (Not in use)** **Attaching to CHANNEL B (DIMM0) (1GB standard)** **CHANNEL B (DIMM1) (Not in use)**

Note

- If you use in the other combination except above list, the movement is not guaranteed.Refer to the "ATX mother board, DIMM" of the PC Service Manual "PC-NRT-RS3".
- PC-NRT-RS3 has DIMM installed.
- The DIMM is not set as an option.

1130

33_1

Main options (Package contents of image edition)

*	Description/Explanation	Name
*	Calendars	Card/Calendar Creation Software (Package-A)
	Post Card Prints	
	Business Cards	
	Card Prints	
*	Frame Prints	
	Letter Printing	
*	Multi-Frame Prints	Multi-Frame Print Creation Software (Package-B)
	Album Prints	
	Package Prints	
	Contact Print Style Photos	
	ID print	
*	Red Eye Removal Function	Red Eye Removal Software
	Automatic Red Eye Removal	

•*

Optional software list

Explanation

- The image edition software package is installed and protected when shipping a machine from factory.
- Release the protect of the image edition software package with key CD.
- Refer to the Specifications of each machine for the parts No.
- The standard templates are included in the image edition software in the above list.

Note

- You can add the templates separately.
  There are 4 types below as an option.
  - •Templates for Frame (29 types)
  - •Templates for Calendar (21 types)
  - •Templates for Album (21 types)
  - •Template for Business card (67 types, appendix: 14 types of cards, 16 types of Multi)

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1140

33_1

Main options (Others 1)

Name	Description/Explanation
Digital Masking Unit	By adding/installing the Digital Masking unit (option), it is possible to delete the scratch on the film more naturally.
Noritsu CD-R Engine (Windows/Mac)	Used for saving the Viewer software for Macintosh to CD-R/RW. Also necessary when saving the images to optional QSS CD.
QSS CD (TYPE A)	CD-R to which the viewer software (Deluxe Viewer) has been written. The label is printed on the CD-R. (100 CD-R) (Common among the QSS-28/29/30/31/32/33)
QSS CD (TYPE B)	CD-R to which the viewer software (Deluxe Viewer) has been written. The label is not printed on the CD-R. (100 CD-R) (Common among the QSS-28/29/30/31/32/33)
Package Print Format Creation Software	Used for making templates for package print as you like.
Connection Software for CD-R Writing	It is the software to use the "Bravo II" (option) with the QSS.

Explanation

- Refer to the Specifications for details.
- The function of the Image Rotation Booster Kit is available as standard.

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1150

33_1

Main options (Others 2)

Name	Description/Explanation
CD-R external writing system	Using the CD-R external writing system made by Rimage, write the image data to CD-R at the same time of printing, and make a label print. (Common among the QSS-28/29/31/32/33)
CD-R external writing system connecting set	Required kit for the connection of CD-R external writing system (Rimage) This consists of PCB, cable and software. (Common among the QSS-28/29/31/32/33)
CD-R external writing kit for the external PC	Using the CD-R drive of external PC prepared by a customer, write the image data to CD-R at the same time of printing. (Common among the QSS-28 and 29/30/31/32/33)
QSS Printer Driver	The driver software that is necessary to output the image data in the external PC with the QSS. (Common among the QSS-28/29/30/31/32/33)
ARCNET-HUB extension unit	Necessary when installing the devices which require optical fiber cables such as the PU, CD-R External Writing System, etc.
d-Storage Type1	Type1:The device to save the image data scanned from the film to the hard disk of the external PC which is prepared by a customer.
D-Storage Type2	Type2: It succeeds the function of the D-Storage Type1. Also, the QSS and the Consumer Terminal (CT) can read the data stored in the D-Storage via a LAN cable.

Explanation

- Refer to the Specifications for details.
- Component parts of the "CD-R External Writing System Connecting Set" and the "CD-R writing kit for external PC" are different depending on the QSS-28 and 31/29/32/33.

Note

- Refer to the Training Manual [CD-R External Writing System]
- Refer to the Training Manual [QSS Printer Driver]
- Refer to the Training Manual [d-Storage]

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1160

33-1

Main options (Others 3)

Name	Description/Explanation
CVP	Dedicated to each QSS model (28/29/30/31/32/33)
Pricing unit	The device to calculate prices and issue statements automatically (Common with the QSS-32)
Monitor hood	Common among 28/29/30/31/32/33
Film cleaner kit	The device that removes dust and eliminates static electricity from films (Same as the one for the QSS-32)
Compact archive unit	Used to storage a certain amount of image data to hard disk drive.
PU mount	The mount to place the Pricing Unit (Only for the QSS with the single magazine)
Bar code reader	The device to read a bar code of the Order Sheet outputted by the Network (CT).
Sorter modification kit (for 82 prints)	Kit for modifying the print sorter unit to that for 82 prints in one order. Number of orders which can be stocked: 14

Explanation

- Refer to the Specifications for the part No.
- *

  *

1170

33_1

Main options (Others 4)

Name	Description/Explanation
Hour meter	Meter which displays the accumulated working time *
Non-resettable counter	*
Flatbed Scanner Desk	The mount to place the A4-sized flatbed scanner
Cabinet	The mount to place the A-3 sized flatbed scanner
Digital flowmeter	Used to measure the circulation amount of the CD, and the amount is displayed on the monitor.
Cooling water plumbing unit	Cooling plumbing to keep the temperature of the processing solution constant.
Exhaust duct	The unit that discharges the smell of the processing solution

Explanation

- Refer to the Specifications for the part No.
- There are 2 kinds of cooling water plumbing unit. One is for connecting to the chilling unit and the other is for not connecting to the chilling unit.

1180

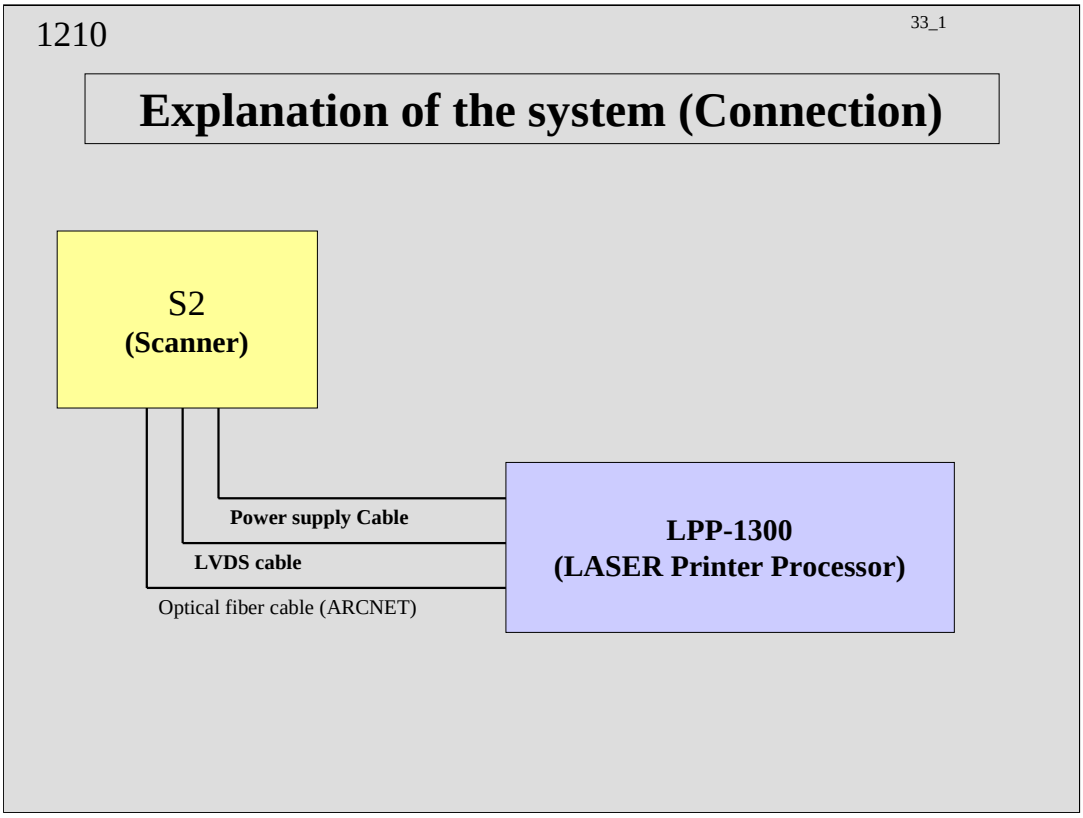
33_1

Main options (magazines)

Standard magazine	Compatible between Normal and Kodak specification. (Carry out the unit replacement only as it is already adjusted.)
QL magazine	For QL paper (Carry out the unit replacement only as it is already adjusted.) The core unit is different from the standard magazine.

Explanation

- The magazine for the QSS 33 is the same with that of the QSS-30.



Explanation

- There is no additional information.

1220

33_1

Print sizes

Processable paper width	82.5 to 210.0 mm
Paper advance length	82.5 to 356.0 mm
Maximum print size	210.0 mm x 356.0 mm

Usable paper

Maximum diameter of paper	250 mm (180 m length)
Usable paper	Digital paper / Analog paper Thin paper (0.2 mm) is supported.

Explanation

•There is no additional information.

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1230

33_1

Computer Specifications (PC-NRT-RS1):Standard PC

	Product name	Specifications
CPU	Pentium IV	**2.4GHz**
Mother board	**FB9-L**	
Memory	**R0086851**	**512MB PC2700**
Hard disk	**HDS722580VLAT20 [WD800BB-00DKA0]**	**80GB 7200rpm**
SCSI board	**AVA-2915LP BAG BULK**	
Sound Board	**SOUND BLASTER 4.1 DIG**	
Keyboard (Japanese)	**FKB8724-501/10**	
Keyboard (English)	**FKB8725-401/10**	
Mouse	**ECM-S6702**	**Optical**
OS	**Windows 2000 Professional SP4.**	

[ ]: Discontinued No.Both of old type and new type can be used.

Explanation

- It is impossible to replace the ATX mother board only itself.
- Replace the mother board unit as a whole set. (ATX mother board, CPU and CPU cooler)

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1231

33_1

Spec Table of the Media Drive 1 (PC-NRT-RS1):Standard PC

Drive	**Product name**	Maker	Types of media	Media Capacity	Interface	**Remarks**
3.5FDD	FD-235HG-C304	TEAC	FD	2DD Type (720KB) 2HD Type (1.44MB)	IDE	2 modes
MO	MCM3064SS	FUJITSU		640MB 540MB 230MB 128MB	SCSI-2	
ZIP	Zip250	Iomega	ZIP	250MB 100MB	IDE(ATAPI)	
CD-ROM drive	FX48BOM	Mitsumi Electric (Mitsumi Denki)	CD-ROM CD-R CD-RW	650MB 700MB	IDE(ATAPI)	Read: 48x

Explanation

- There is no additional information.

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1232

33_1

Spec Table of the Media Drive 2 (PC-NRT-RS1):Standard PC

Drive	**Product name**	Maker	Types of media	Media Capacity	Interface	**Remarks**
CD-R/RW	PX-W4824TA	PLEXTOR	CD-ROM CD-R CD-RW	650MB 700MB	IDE(ATAPI)	Read: 48x Write: 48x Overwrite: 24x
DVD	LF-D291NS	Panasonic	DVD-RAM	Single side 4.7, 2.6GB Double-side 9.4, 5.2GB	SCSI-2	TYPE1 (Cartridge-type,Impossible to remove the disk)
						TYPE2 (Cartridge-type,Possible to remove the disk)
			DVD-ROM	Single side 4.7GB		TYPE2 (Cartridge-type,Possible to remove the disk)

Explanation

- There is no additional information.

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1240

33_1

Computer Specifications (PC-NRT-RS3):High spec PC

	Product name	Specifications
CPU	Pentium IV	**2.8GHz**
Mother board	**FB9-L**	
Memory	**R0086852**	**2GB PC2700**
Hard disk	**HDS722580VLAT20 [WD800BB-00DKA0]**	**80GB 7200rpm RAID-0 with 2HD**
SCSI board	**AVA-2915LP BAG BULK**	
Sound Board	**SOUND BLASTER 4.1 DIG**	
RAID Card	**RF010037**	
Keyboard (Japanese)	**FKB8724-501/10**	
Keyboard (English)	**FKB8725-401/10**	
Mouse	**ECM-S6702**	**Optical**
OS	**Windows 2000 Professional SP4.**	

[ ]: Discontinued No.Both of old type and new type can be used.

Explanation

- It is impossible to replace the ATX mother board only itself.
- Although the mother board of the high spec PC is the same with that of the standard PC, the CPU of the high spec PC is different from that of the standard PC.

Note

- RAID0:This technology is for improving the accessing speed by dispersing the access to the plural hard disks.

1241

33_1

Spec Table of the Media Drive 1 (PC-NRT-RS3):High spec PC

Drive	**Product name**	Maker	Types of media	Media Capacity	Interface	**Remarks**
3.5FDD	FD-235HG-C304	TEAC	FD	2DD Type (720KB) 2HD Type (1.44MB)	IDE	2 modes
MO	MCM3064SS	FUJITSU		640MB 540MB 230MB 128MB	SCSI-2	
ZIP	Zip250	Iomega	ZIP	250MB 100MB	IDE(ATAPI)	
CD-R/RW	PX-W4824TA	PLEXTOR	CD-ROM CD-R CD-RW	650MB 700MB	IDE(ATAPI)	Read: 48x Write: 48x Overwrite: 24x

Explanation

- There is no additional information.

1270

33_1

Spec table of media drives (Five slots card reader)

Drive	Product name	Maker	Types of media	Media Capacity	Interface
Five slots card reader	SMC Micro Systems	Microtek International	SmartMedia	*1	USB
			CompactFlash	*2	
			PC card	*3	
			SD Card	*4	
			Memory Stick	*5	
			MMC	*6	

*1: Based on SmartMedia Physical Specifications Version 1.2
Drive voltage 3.3V
*2: Compliant with CompactFlash Specification Version 1.4
No limit in the capacity.Both of Type I and II (Microdrive) can be set.
*3: Compliant with PC Card Standard Release 8 PC Card ATA Specification No limit in the capacity.
Drive voltage: 5V, 3.3V/5V
*4: compliant with SD memory card Specifications Version1.0
*5: compliant with Memory Stick Format specification Version1.3
*6: Based on MMC system Specification Version 2.1

Explanation

- The media with security cannot be accessed.
- The PC card which drive voltage is only for 3.3V cannot be processed.
- As for the xD-Picture Card, the PC card adaptor or CompactFlash adaptor is necessary.
- As for Memory Stick and SD Card, when using the PC card adaptor with write-protected, it may be impossible to read the image data.

Note

- Refer to the [Usable media and file types] in [Getting Started] for details.

1280

33_1

Procured parts at customer's site

It is possible to connect the FB scanner (on the market) with the QSS for Print to Print.

It is necessary that a customer prepare the device to be used separately.

The followings are the products specified by Noritsu.

Name	Product name	Maker	Connection	Description
Flatbed scanner	**Perfection2450**	**EPSON**	**USB**	Used for "Print to Print". Up to A4 size
Flatbed scanner	**Perfection3200**	**EPSON**	**USB**	Used for "Print to Print". Up to A4 size
Flatbed scanner	**GT-10000+**	**EPSON**	**SCSI**	Used for "Print to Print". Up to A3 size
Flatbed scanner	**GT-15000**	**EPSON**	**SCSI/USB**	Used for "Print to Print". Up to A3 size
Flatbed scanner	***** (**Perfection4870)**	**EPSON**	**USB**	Used for "Print to Print". Up to A4 size

*****

Necessary Options (Z809658)

Color input target + Floppy	Used for the calibration of flatbed scanner.

Explanation

- Refer to the operating instructions attached to each device for handling the peripherals and connecting method.
- As for some problems concerning the FB scanner, contact each maker.
- The necessary option is not sold on the market, so it is necessary to purchase it as an option.

1290

33_1

Comprehension check

[**Specifications]**

- Did you understand each unit names of the QSS-33?
- Do you understand processable media types and format?
- Can you explain which option is necessary depending on customer's request?
- Can you understand the specifications of the scanner?
- Can you explain when you are asked about the PC spec?
- Can you understand the difference between the AFC and the AFC-II?
- Can you understand the processable print size?

(Question)

- What is the difference between the QSS-3301 and the QSS-3302?
- What is the processable format?
- Is it possible to set the older type of magazine (the one for the QSS-30) to the QSS-33?
- What is the standard GB of the standard PC memory?
  How many GB can be added to the standard PC memory as an option?
- How many GB is used for the HDD of the standard PC?
- What is the maximum paper size for printing?

33_2

Chapter 2
Outline of the system

Explanation

- There is no additional information.

2000

33_2

The point of this chapter

Key points

- Explain the outline of the system for each machine.
  Scanner, Exposure Engine, Image Size, Paper Size and Digital ICE

Upon completion of the lesson, you will be able to:

- Understand the specifications and structure of scanner.
- Understand the number of pixels for scanning and the number of resolution for print.
- Understand the dust and scratches which can be processed with the DIGITAL ICE and its theory.
- Understand the paper advance way.
- Understand the structure of exposure engine and the function of each section.

How to proceed the training

Explain, using the Training material and actual machine .

2010

33_2

Cautions for laser unit and LED light source unit

Before servicing the machine, be sure to follow the following instructions to avoid laser beam or LED beam radiation exposure.

•Do not perform any work other than the work which is specified in the manual.

•Do not perform the following dangerous works.

- Reflect the light path of the laser unit and LED light source unit by inserting a mirror or the like in the light path of the laser beam or LED beam.
- Change the light path of the laser unit and LED light source unit.
- Replace the optical parts while the electricity of the laser unit and LED light source unit is ON.
- Turn ON the electricity in the removed exposure advance unit.
- Turn ON the electricity in the removed laser unit, LED light source unit from the machine.

Explanation

- Although the QSS-32 is an IEC Class 1 laser unit product, the laser unit itself is at IEC Class 4.
- LED is classified into the IEC-Class1M both as the LED light source product and the LED light source unit.

Note

- The LED beam is considered to be the laser beam in the general meaning.
- IEC=International Electro technical Commission

2020

33_2

(Reference) Overview of Laser Safety Classes

Class	Evaluation of danger
Class1	Safe for normal operations, and not hazardous when optical instruments are used.
Class1M	Wavelength of the laser: 302.5nm to 4,000nm Same as Class 1, but potentially hazardous when optical instruments are used.
Class2	Wavelength of the laser: 400nm to 700nm Safe for unintended exposure, but prolonged staring should be avoided. Naked eye is protected by blink reflex.
Class2M	Wavelength of the laser: 400nm to 700nm Same as Class 2, but potentially hazardous when optical instruments are used.
Class3A	Wavelength of the laser: 302.5nm to 10^6nm Potentially hazardous when eye is exposed.
Class3B	Hazardous when eye is exposed, but diffuse reflections are usually safe.
Class4	Diffuse reflection may be hazardous.Hazardous to eye and skin, so protect them. Fire hazard.

Explanation

- As for the [Class1M], it does not cause physical harm unless you do not see LED beam directly using lens or optical instruments.

2030

33_2

Scanner LED light source

LED light source
The LED light source consists of 5 colors LED, B, G, R1, R2, and IR. It is different from the halogen lamp. It is suitable for the scanner light source because it is unnecessary to replace, and it can change the light intensity of each color by changing the current value.

Light source parts
The light source parts are not consumable parts, so it is unnecessary to replace them.

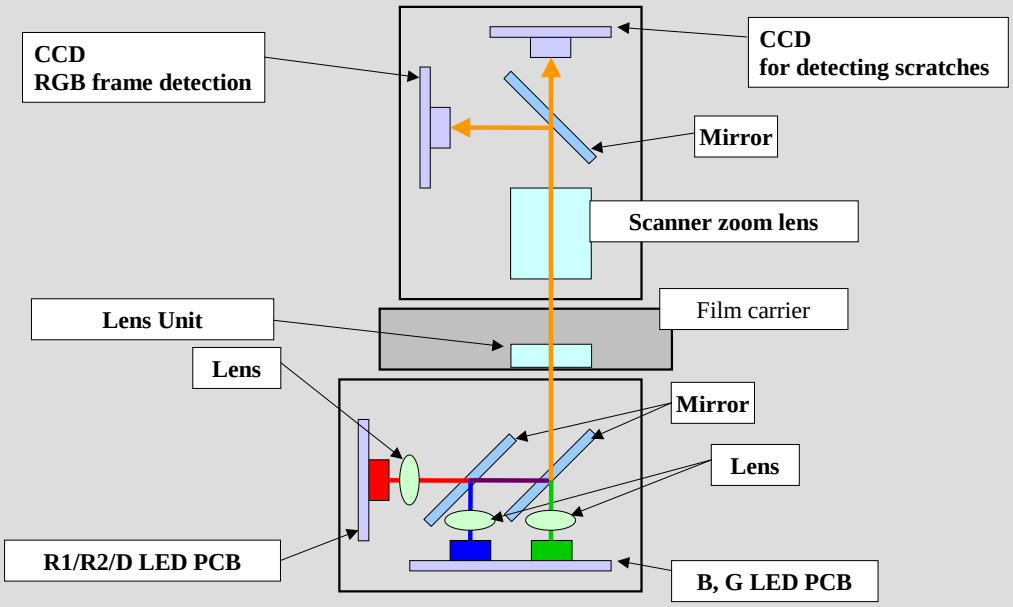
Explanation

- There is no additional information.

2040

33_2

Exposure route of scanner LED light source



Explanation

- There is no additional information.

2050

33_2

Scanner

Image capture method	
Optical resolution (Main scanning)	Input one line image with line CCD.
Scan pitch (Sub scanning)	Strip film:Film is moved. Mount:Carrier is moved.
CCD	Scan RGB each with line CCD (5340 pixels).
Others	Automatic dust and scratch removal for films is available. (DIGITAL ICE) *1

Sticker for permission of use*1

Explanation

- DIGITAL ICE is a trademark of Kodak. *1

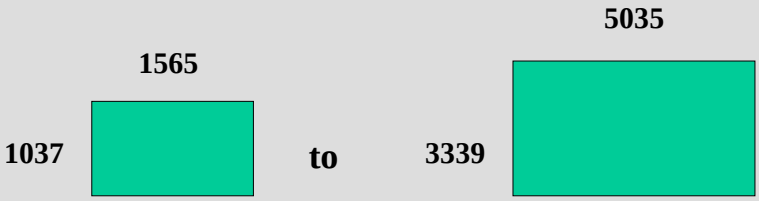
2060

33_2

Resolution of the image

- Input resolution (resolution of the image) is different depending on the film size and paper width each.

  Change the resolution of the image by the zoom lens of scanner.



Resolution of the image when scanning 135 film (Unit: pixel)

Explanation

- There is no additional information.

2070

33_2

Resolution of the image (film size each)

Film size	Minimum	Maximum
135F	1037 x 1565	3339 x 5035
135H	2075 x 1463	3339 x 2354
135P	1265 x 3583	1777 x 5035
135FP	1037 x 2841	2075 x 5682
135FPS	1318 x 3218	2075 x 5066
240C	1406 x 2110	2832 x 4251
240H	1406 x 2465	2832 x 4966
240P	1448 x 3489	2061 x 4966
110	1109 x 1459	2400 x 3158
6 x 4.5	4824 x 3533	4824 x 3533
6 x 6 (6 x 6V)	4832 x 4760	4832 x 4760
6 x 6H	4760 x 4832	4760 x 4832

Explanation

- In the 120 film, the resolution of the image is constant, but the width [6] of [6 x #] is slightly different depending on each size on the basis of the 120 size standard.
  Therefore, even if you scan it at the same magnification, the resolution of image is to be the present size as a result, because the film width with image is different.

Note

- In case of wide scanning for 120 and mount, the number of resolution for scanning is as follows.

  6 x 4.5W ---------- 5078 x 3859

  6 x 6W (6*6VW) ---------- 5078 x 5074

  6 x 6HW ---------- 5074 x 5078

  6 x 7W ---------- 5078 x 6298

  6 x 8W ---------- 5078 x 7097

  6 x 9W ---------- 5078 x 7505

2070

33_2

Resolution of the image (film size each)

Film size	Minimum	Maximum
6 x 7	4815 x 5902	4815 x 5902
6 x 8	4903 x 6610	4903 x 6610
6 x 9	4903 x 7139	4903 x 7139
135F mount	1120 x 1718	3268 x 5011
135H mount	2241 x 1467	2736 x 1791
240 mount	1474 x 2590	2561 x 4501

Note

- In case of wide scanning for mount, the number of resolution for scanning is as follows.

  135F mount W--------Minimum: 1275 x 1913 Maximum: 3720 x 5580

  135H mount W--------Minimum: 2550 x 1806 Maximum: 2550 x 1806

  240 mount W----------Minimum: 1774 x 3209 Maximum: 3082 x 5575

2080

33_2

Minimum necessary pixels for paper size each

Size (mm)	Pixel	Size (mm)	Pixel
82.5	974	152	1795
89	1051	178	2102
102	1205	203	2398
127	1500	210	2480

Note

- Calculating formula

  Size (mm) / 25.4 x 300 (dpi) (resolution of printer) = Resolution of the image for one side

  The above is just the calculated number. Actually the image is scanned a little larger.

2090

33_2

Scanning

- The zoom value of scanner is decided on the basis of the largest among the paper sizes, which are registered in the print channel (C/P/H).

  Example)

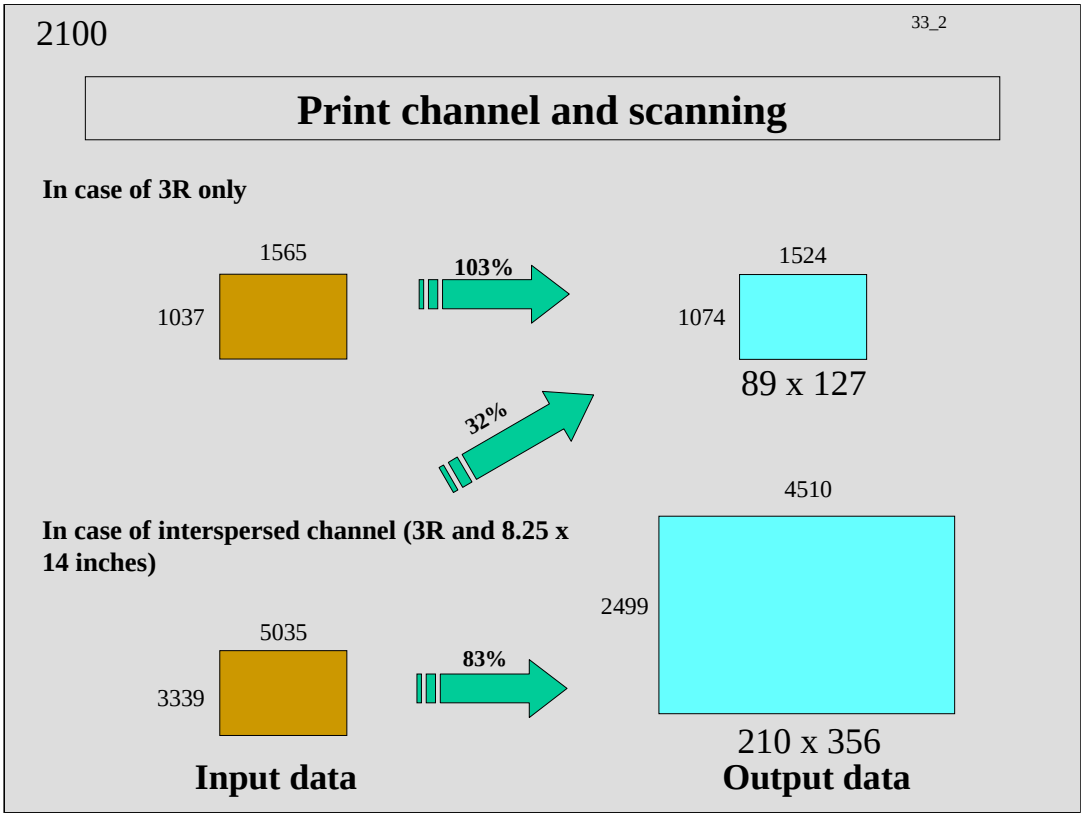
  In the 135F, when setting “89 x 127” and “210 x 356”, the resolution of image is 3339 x 5035.

  The resolution of image for 89 x 127 channel only is 1037 x 1565.

  The quality is different depending on the combination of print channel.

Explanation

- There is no additional information.



Explanation

- There is no additional information.

2110

33_2

Pre-scanning

Film size	Resolution	**Film size**	Resolution
135F	259 x 391	6 x 4.5	301 x 220
135H	259 x 182	6 x 6	302 x 297
135P	138 x 391	6 x 7	300 x 368
135FP	259 x 710	6 x 8	306 x 413
135FPS	259 x 633	6 x 9	306 x 446
240C	223 x 391	135F mount	280 x 429
240H	223 x 391	135H mount	280 x 183
240P	223 x 391	240 mount	184 x 323
110	277 x 364		

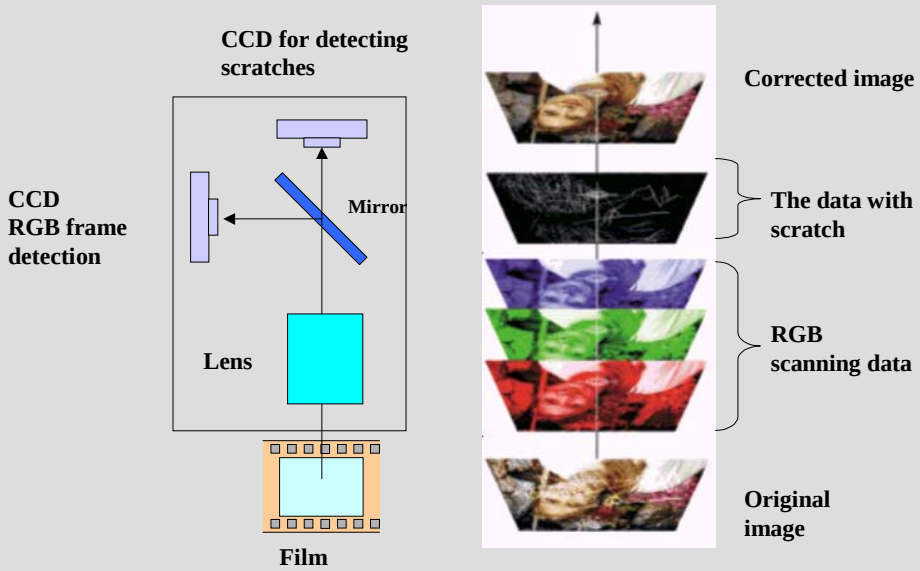
Explanation

- The image data scanned in the Pre-scanning is used for the index prints, label index prints, index prints of contact print style photos and for monitor display.

2120

33_2

DIGITAL ICE Technology



Explanation

- The technology to make the images without scratch, dust, etc. In addition to the CCD which takes the color information of RGB, the another CCD is added. It detects the dust, scratch, etc. on the film. This corrects the scanned image information.

2130

33_2

Function to remove the scratch and dust on the film

Comparison table with the conventional models

Scratch and dust removal function on the film	Scratch removal function on the base side of the film (DIGITAL ICE:standard)
	Scratch removal function on the base side and the emulsion side of the film (Digital Masking:option)

The conditions for functioning the scratch and dust removal function on the film

	DIGITAL ICE:Standard	Digital Masking :Option
PCB	D-ICE PCB (standard) D-ICE control PCB (standard)	D-ICE PCB (standard) D-ICE control PCB (standard) Scratch mend PCB 1 x 2 (option) Scratch mend PCB 2 (option) Data change over PCB (option) DIMM (option)
Installing the software	Unnecessary	Unnecessary
Registration in the mode	Place a check mark for [DIGITAL ICE Correction] in [Operator Selections].	Place a check mark for [Digital Masking Unit] in [Operator Selections]. You can set the [Digital Masking Unit] ON or OFF in the [Operator Selections].

Important

- As for the scratch and dust removal function on the film, in addition to the conventional DIGITAL ICE, the Digital Masking (the scratch removal function on the base side and the emulsion side of the film) which is developed by the NKC is added.
- When explaining about the scratch removal function on the base side and the emulsion side of the film, please call it Digital Masking which is developed by the NKC.

Note

- The Digital Masking Unit (option) consists of Scratch mend PCB 1 x 2, Scratch mend PCB 2, Data change over PCB, and DIMM.
- If the Digital Masking Unit is attached, a check mark is placed for the option registration automatically.

2140

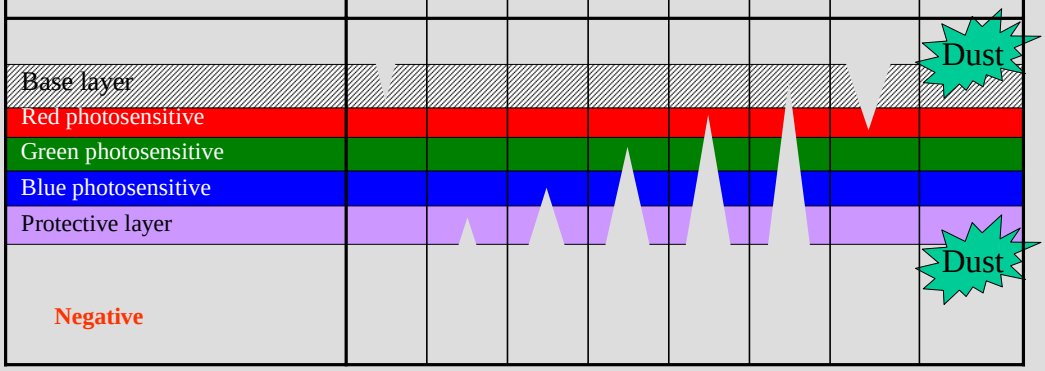
33_2

Scratches and dust which can be corrected

(e.g.)In case of color negative

Scanner side

	Scratches and dust which can or cannot be corrected							
DIGITAL ICE: Standard	x	x	-	-	-	-	-	x
Digital Masking: Option	x	x	x	x	-	-	-	x



x: possible

LED light source side

Explanation

- The DIGITAL ICE deletes the dust or scratch, which is stuck to the film surface, automatically.
- When the Digital Masking unit is installed, it is possible to delete the scratches such as the scratch reaches photosensitive from the protective coat.
- However, it is impossible to delete the deep scratches such as the scratch reaches the red photosensitive from the protective coat or the scratch reaches the red photosensitive from the base layer.
- The DIGITAL ICE does not function normally when a lot of silver is included in the part where the image is created, like in case of monochrome films and desilvering.
- In the Kodachrome films, the effect of DIGITAL ICE is weak to the high density or low density of a film, and the scanned image will deteriorate.

  Turn OFF the function of DIGITAL ICE before printing.

  You can set the function of DIGITAL ICE ON or OFF in the “Operator Selections”.

  (However, in case of monochrome film, the DIGITAL ICE is turned OFF automatically.)

Note

- It is not possible to remove fingerprints because the IR (the LED light source) cannot detect oil.
- The “blurring caused by the roller pressure” cannot be corrected.

2150

33_2

Colorimeter

Changes from the conventional machines

- It is possible to set the maximum-sized paper in the Colorimeter without cutting it.
- The calibration plate is built into the colorimeter.
- When measuring test prints or calibration plate, they are touched to the colorimeter by using the pressure change solenoid. By doing so, the precision of color measuring is improved because they are less influenced by outside light.

Important

- It is very important to clean the calibration plate because the gradation from white to black changes by the dirt on the plate.
- Clean the calibration plate with a neutral detergent and water.

The Maintenance Manual [Cleaning the Calibration plate]

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2160

33_2

Paper sizes and transportation

Paper transportation

There are two patterns for the lane select operation in the paper advance unit, and their conditions are as follows.

Items	Reference
When the paper width is 102mm or less (lane is selected)	54000
When the paper width is 102.1mm or more (lane is not selected)	

Refer to the Service Manual Chapter 5 for details.

Explanation

- There is no additional information.

2170

33_2

Laser Engine

Laser:
Light Amplification by Stimulated Emission of Radiation

The exposure method by Visible Radiation is employed like the conventional machines.

Note

- Merit

  (1) It is possible to reduce the power consumption in the printer.

  (2) The uniformity calibration is unnecessary.

  (3) The laser is not affected by the magnetism.

2180

33_2

Printer Exposure Engine

Exposure method	Line exposure method by the Laser engine
Output gradation	4096 gradation
Maximum exposure width	QSS-32: 315 mm (12.4-inch) QSS-33: 216 mm (8.5-inch)
Print resolution	300 dpi (Main Scanning) x 600 dpi (Sub Scanning)
Exposure speed	58.42 mm/sec
Light source	B laser, G laser, R laser

Explanation

- The exposure speed by the laser engine is kept at a constant speed and it does not change.
- The maximum exposure width is the value including the hem for adjusting the exposure center.

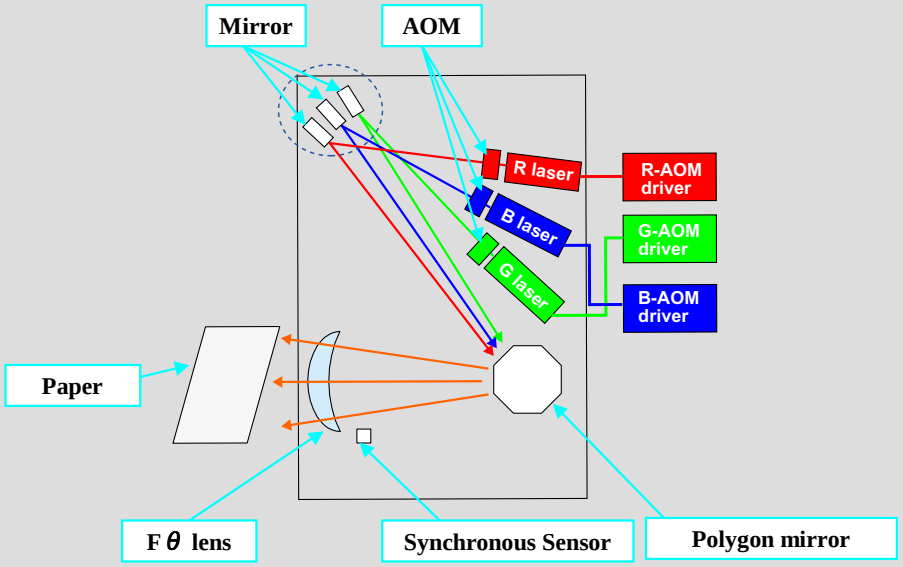
Note

- The maximum exposure width for the paper of the QSS-32 is 305mm.
- The maximum exposure width for the paper of the QSS-33 is 210mm.

2190

33_2

Structure of Laser Unit



Explanation

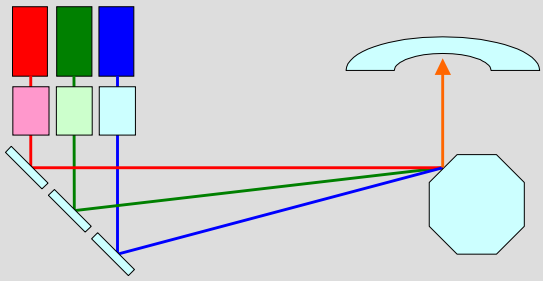
- The prism is disappeared.

2200

33_2

Explanation of laser unit

Laser	Visible Radiation Laser for R, G, B each
AOM	Acousto-Optic Modulator Adjusts the strength and weakness of laser light.
Mirror	Changes the direction of laser light.
Polygon mirror	Rotates in a certain speed and scans in the Optical resolution (Main line).
F θ lens	Changes the angle of laser light according to the angle of incoming light, and maintains the constant speed.
Synchronous Sensor	Detects the scanning timing of R, G, B.



Explanation

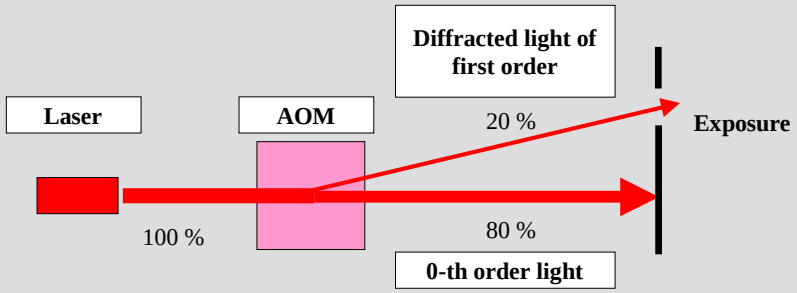
- There is no additional information.

2210

33_2

Structure of Laser Unit (AOM)

- AOM controls the strength of laser light.
- The diffracted light of first order is used for exposure.



The direct light is called 0-th order light.

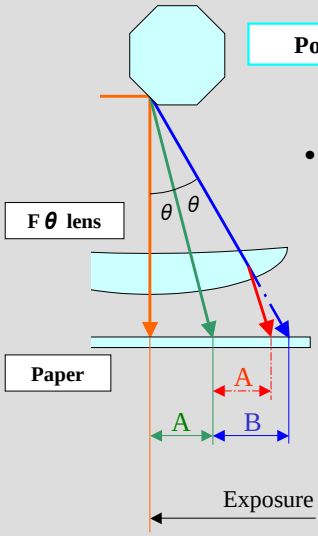
Explanation

- When the voltage is not turned ON to AOM, the incoming laser beam passes through as it is.(0-th order light)
- When turning ON the high frequency voltage, the ultrasonic waves occurs, and the diffracted light which is separated from 0-th order light occurs.(Diffracted light of first order)
- Change the rate of 0-th order light and the diffracted light of first order by changing the high frequency voltage on AOM, and control the strength of light (diffracted light of first order) to be used for exposure.

2220

33_2

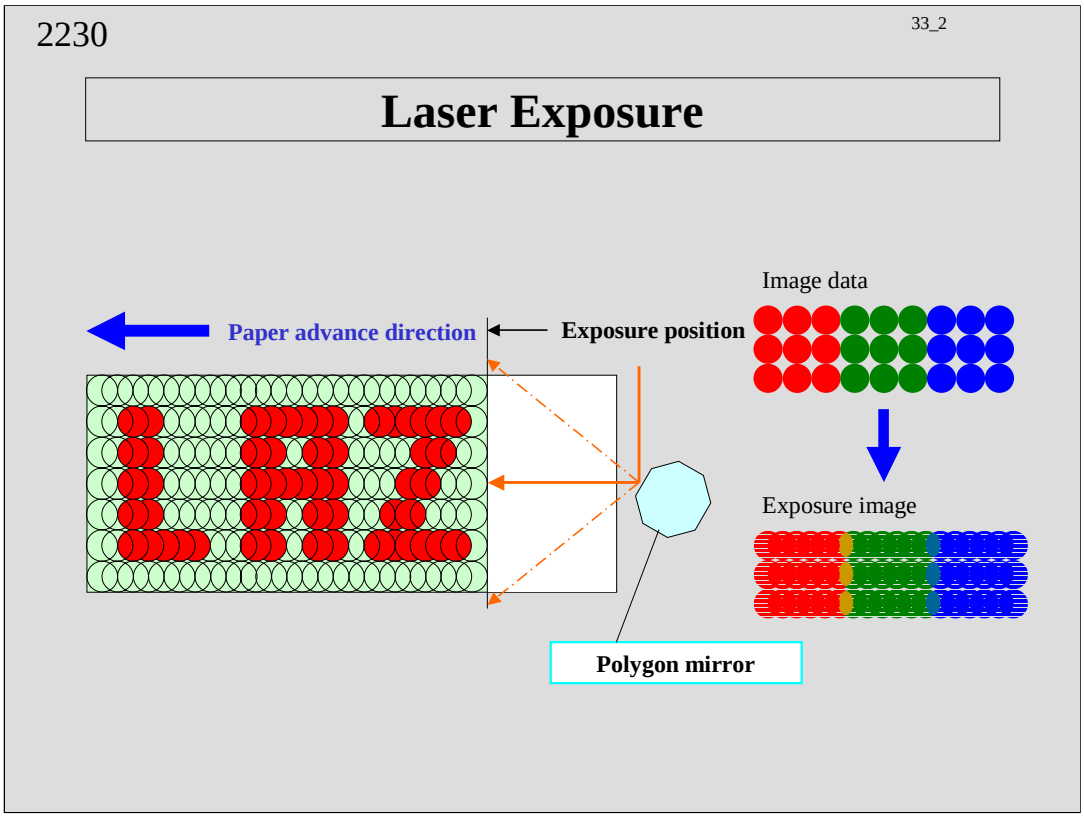
Structure of Laser Unit (F θ lens)



- The F θ lens corrects the dispersion of linear velocity caused by the angle of incoming beam.

Explanation

- The travel (distance) on the paper is different between “the light outputted from the exposure center at the angle θ” and “further output light at the angle θ” The travel (distance) on the paper is different between “the light outputted from the exposure center at the angle light at the angle θ and “further output light at the angle θ.(As shown in the illustration, length A, B).
- The F θ lens changes the angle of diffracted light according to the angle of incoming beam, and corrects the difference of travel (distance) on the paper.



Explanation

- Resolution
  Optical resolution (Main or the CCD line): 300 dpi
  Scan pitch (Sub Scanning): 600 dpi
- Reason why the sub scanning is exposed to overlap.
  (1) To get the soft image without the scanning unevenness (density difference of 1 scanning line).
  (2) Not to occur the open caused by the time-lag between the advance and exposure.
  (3) Not to show the unevenness of color when the time-lag of exposure occurs.

2240

33_2

Comprehension check

[Outline of the system]

- Do you understand about the inner structure of the LED unit?
- Do you understand the specification of scanner?
- Do you understand the processable films by digital Masking?
- What is necessary to use the digital Masking?
- Do you understand that the number of pixels for scanning varies depending on the print sizes?
- Do you understand the conditions of [advance in single row] and [advance in double rows]?
- Do you understand the specification of laser?

[Question]

- How many light sources does the LED unit have?
- What is the number of pixels for scanner?
- What is the print size that the number of pixels for scanning is different from “89 x 127 (135F)”?
- What is the condition for advancing the paper in double rows with the Paper Advance Unit?
- What is the exposure time of laser?

33_3

Chapter 3
Operations

Explanation

- There is no additional information.

3000

33_3

The point of this chapter

Key points

- Study the operations

  Printing operations, Start up checks, Close down checks, ON/OFF procedure of power supply

  Status display of LED, CD-Viewer, CVP (Correction Value Print), Index prints

Upon completion of the lesson, you will be able to:

- Explain each printing operation to users.
- Explain the image storing to media to users.
- Explain printing operations in the Edit Mode to users.
- Explain the input from Flatbed scanner to users.
- Explain the Start Up Checks and Close Down Checks.
- Explain ON/OFF procedure of power supply to users.
- Explain the status display of LED, details of CVP and index prints.
- Understand about the CD-Viewer.

How to proceed the training

Carry out the practical training, or explain the items using the sample prints.

3010

33_3

Setup during the Start Up Checks

Daily setup	Execute once a day for each paper type to be used.
	Correct the temporary aging of exposure engine, light source and processing solution.
	Make a 22-step test print.

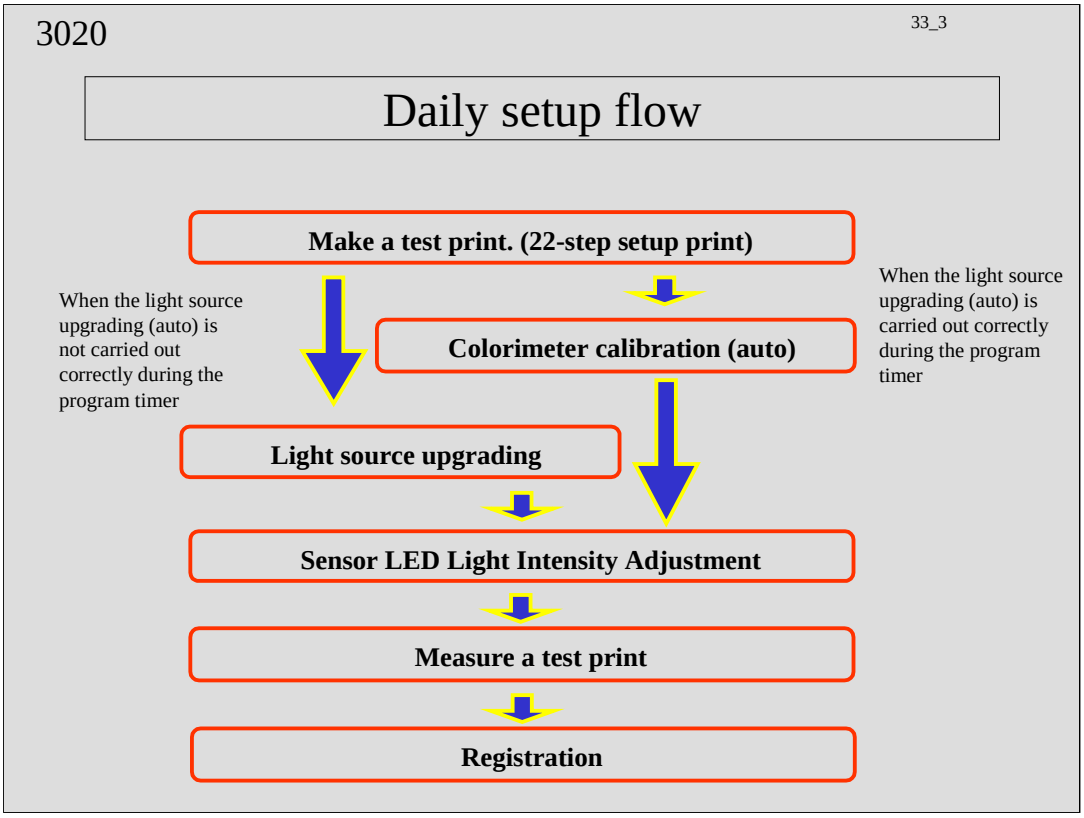
Explanation

- The laser engine causes the temporary aging by the fall of maximum output, change of output wavelength and dirt of optical parts.

  Refer to the "Start Up Checks" in the Maintenance Manual for Start Up Checks.

Note

- The weekly setup and the monthly setup are unnecessary from the QSS-32 and the 33.


3020
33_3
Daily setup flow
Make a test print. (22-step setup print)
When the light source upgrading (auto) is not carried out correctly during the program timer
When the light source upgrading (auto) is carried out correctly during the program timer
Colorimeter calibration (auto)
Light source upgrading
Sensor LED Light Intensity Adjustment
Measure a test print
Registration

Explanation

- After exposing the test print, the calorimeter calibration will be executed automatically.
- The light source update is executed automatically for the carrier to be set during the program timer.

  e.g.) When 240 lane is set: 240 light source update is executed.

  When 120 AFC is set, 120 light source update is executed.
- When the light source update is not completed correctly during the program timer, it is executed again automatically for the carrier to be set during the daily setup.

Note

- As for the other carriers except the one to be set during the program timer, update the light source when replacing the carrier or switching the lane.
  Yet, it is necessary to perform the Light Source Update when using the film carrier 24 hours after the last performance of the Light Source Upgrade.

3030

33_3

Explanation of operations

- Explain with the actual machine.

Explanation

- As for AMC, up to 40 mounts can be set.
- Use the dummy mounts of AMC when switching the order.
- AMC is available for PJP.
- Components of AMC

  Main body

  Insertion stocker

  Ejection stocker

  Dummy mount (for switching the orders) Quantity: 5

  Single adaptor

  Packing unit
- When the media output destination is MO, FD, DVD, ZIP, or CD-R/RW, it is possible to specify [number of media] and [number of label index prints].However, make sure that [Additional Writing] is set to [No] on the [Option Registration] display. When [Additional Writing] is set to [Yes], it is impossible to set [Label Counts].

  [Number of media]:Can be set on the message [No.1527 Write the Data. Set the media].

  [Number of label index prints]:Can be set on the Order display.
- The following contents can be specified on the [Print Operation] tab of Operator Selections screen.

  [Color Selection of Print Blank of Positive]:It is possible to specify a color from 9 color options for the unexposed part.

  [Remaining Paper Amount Display]:Possible to select [Count distinct paper magazine A and B] or [Count mix paper magazine A and B].

3040

33_3

Explanation of modes

- Explain the modes, checking the actual machine.

Explanation

- Paper temperature change correction

  R light changes by the temperature change of inside of laser unit and surrounded temperature. The color development of paper may be different.

  In this case, input the correction value in the “Paper Temperature Correction”.

  Corrections:Refer to the Operator's Manual - Additional Operations & Setup Manual - "Correcting the paper coloration due to the temperature variations [Paper Temperature Correction]".

- CCD Noise Suppresion Strength: Correction which is effective only for Under/Over part of films.Noise is likely to occur in parts where there is not much light, so the correction is done only for the part.

Note

- As for the setup and mechanical adjustment, carry out the practical training, so skip the explanation here.

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3050

33_3

Shortcut key

- Explain, checking an actual machine.

Shortcut key		Mode
PASS (F11)	REP (F2)	Setup
	Y (F5)	Maintenance
	M (F6)	System Version Check
	C (F7)	Operation Information
	D (F8)	Machine Specification
	-1 (F9)	Operator Selections
	N (F4)	List of Print channel
	+1 (F10)	Option Registration

( ) : Shortcut key in the Full keyboard

Explanation

- The above Shortcut key is used very often.

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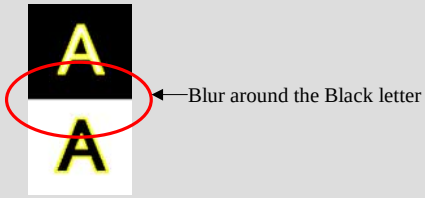
Black Balance Adjustment

[Black Balance Adjustment] is the mode to adjust the blur around Black letter (the defective of color balance) on the print.



Explanation

- The [Black Balance Adjustment] is included in the initial setup and the Setup of the Paper Specification Registration/Setup.

  Also, there are [Black Balance Adjustment] and [Black Balance Adjustment (Manual)] in the [Functions] of the Paper Specification Registration/Setup.
- Refer to the Operator's Manual - Additional Operations & Setup Manual - "Adjusting the blur of letters (color balance) [Black Balance Adjustment]".
- Refer to the Service Manual [32510].

Note

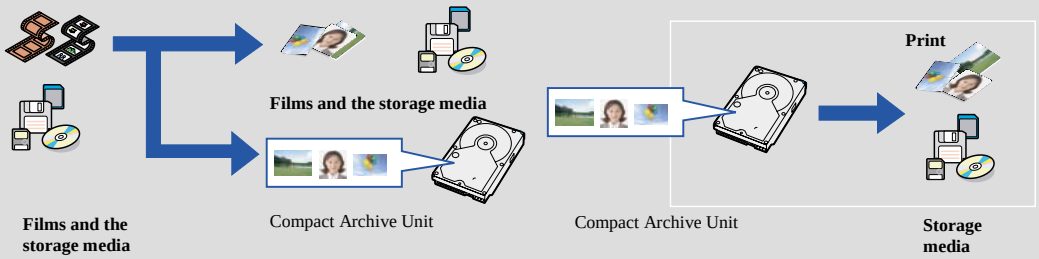
- This is not effective for the dark part of 22-step print, etc.

3070

33_3

What is the compact archive unit?

- **Image storing to compact archive unit**
- **Print from compact archive unit (Image storing to media)**



- Image data: Scanning data which the scratch has been removed, and the data with the magnification when scanning
- Correction data: Stored in the HDD for CAU which is same as the image data

Explanation

- The compact archive unit is an option to save the image data or storage media of scanned film to the HDD for CAU.Also, the image data which is stored to the HDD for CAU can be printed and written to the each storage media.
- The Compact Archive Unit stores the image data such as the corrected color data of the image; this is why it is not necessary to scan the film repeatedly when using the stored image data (e.g. when reprinting the image).
- The image data which is stored to the HDD for CAU is not the universal data but the raw data of scanner.This cannot be used as the image data except when processing with the QSS.
- The correction data is stored in the HDD for CAU.

  Image correction data: Key correction data, 1 Frame Magnification correction data, DSA correction data, Number of prints

  Inner data:Film Size/Types, Frame No. Information, Magnetic Data Information (240 films only)
- The stored image data and correction data cannot be backed up.

  It is impossible to make a back up in the “Backup the data (Close down checks mode)” and “Reading and Writing the data (Maintenance mode)”.

Note

- [CAU] is the abbreviation of Compact Archive Unit.

3080

33_3

Specification of compact archive unit 1

- Available image: Only the image scanned from film
- Storage capacity:

Film (negative)	Storage capacity	Condition (80GB x 1 HDDs)
135F-24EX	approx. 160 films	HC of 3R only (89 x 127mm) 1037 x 1565 pixels/1 frame

- Storage speed: It is different from the CAU of the QSS-30. It processes with the HDD of the QSS, so the processing capacity decrease a little when saving the image data from the film to CAU.
- Reading speed: Same with the normal scanning speed
- Available print mode: Normal Print/package/Album (Edit is not compatible with compact archive unit 1.)

AUTO/PJP/PPI (4/6 frames)

Explanation

- There is no additional information.

3081

33_3

Specification of compact archive unit 2

- Prohibition of automatic deletion

  When the capacity of HDD is full, the data is deleted automatically from the oldest data.

  Possible to store 'the data you don't want to delete' if "Hold on Save Mode" is selected in the "Archive mode".

- Reading the image data

  Possible to read the image data by selecting the archive code from the list of stored image.

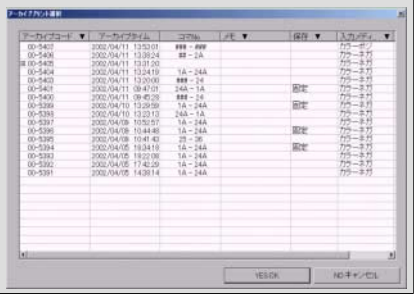
  Possible to read by the number input of archive code.

  Possible to print by selecting plural orders in bulk.

- Magnification

  The rate of enlargement/reduction, as compared to the time that the image was archived.

- Index prints
- CVP



Explanation

- The specific No. for order each (archive code) is imprinted on the index print and back print (CVP). Reprint is possible without negative by checking the archive code.

  Index print: The archive code is displayed on the upper part of print.

  Back print (CVP): When storing the image to compact archive, the printing of CVP is different.(Explain the details in the "Details of back print".)

- Magnification

  If you make a print with bigger size than the stored one in the Archive, the magnification becomes bigger and the quality may become lower.

- When making a print from the Archive, the image data stored in the Archive is not overwritten.

  However, the correction data only is overwritten.

  [Example]

Archive	Correction	Print size	Magnification (%)
1st time	+1D	89 x 127	100
2nd time	+1D, +1Y	127 x 178	114
3rd time	+1D, +1Y	89 x 127	100

3090

33_3

CD Viewer (Simple Viewer Software)

In the QSS-27 or later, the Viewer Software is standard.

Up to 5 orders can be displayed.

If you install the CD viewer utility software, you can set the customer's shop information and logo data on the viewer software.

Explanation

[Explanation of Main function]

- Select the image data of film.

  The images are put in order for each film(Maximum: 5 orders)
- Set the image size for display.

  You can select the display from 3 patterns.
  Big size/ Middle size/ Small size
- Slide show

  You can select various slide display patterns.
- Store the image to each media.

  You can specify the image form and store it to the media.
- Mail attachment

  You can attach your favorite photos in the mail automatically.
- Pint order form

  You can make a print order sheet. This enables to make a print from the images in the CD.
- Set the display screen

  You can select the image quality for image display.

3100

33_3

CD Viewer (Deluxe viewer software)

Up to 5 orders can be displayed.

If you install the CD viewer utility software, you can set the customer's shop information and logo data on the viewer software.

- The deluxe viewer software is not sold as the software.So, you cannot write the deluxe viewer software from a machine to generic CD-R and R/W.
- The QSS CD is supplied from NORITSU.
  The Deluxe Viewer software is contained in the QSS CD in advance.

Explanation

[Explanation of function]

- Image display

  1 frame, 3 frames, 6 frames, 15 frames, Index display

  Slide show

  Store in my photo
- Corrections

  Red-eye Correction, Brightness, Noise Removal, Contrast,

  Sharpness, Unsharp, Saturation
- Special effects

  Puzzle, Solarize, Monotone, Sepia, Mosaic, Blur,

  Pointillize, Emboss
- *

  **
- Make the post cards.

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3110

33_3

QSS CD

- The QSS CD is supplied from NORITSU as an option.
  The Deluxe Viewer software is contained in the QSS CD in advance.

<Kinds>

Name		Contents		Source of supply	Attachment
		Record	Label		
QSS CD (TYPE A)	*	*	*	NORITSU	Nonwoven fabric bag Manual
QSS CD (TYPE B)	*	*	*		
QSS CD (TYPE A)	*	Deluxe Viewer	QSS CD		
QSS CD (TYPE B)	*	Deluxe Viewer	Printable		

•Each CD has part number.

•The attachment is stored in the CD-R case.

Explanation

- The deluxe viewer software is not sold as the software.So, you cannot write the deluxe viewer software from a machine to CD-R and R/W.

3120

33_3

CD-R Engine

- In the QSS-27 or later, the CD-R Engine is the software to write the image to QSS-CD that contains the Deluxe viewer software.
- In the QSS-27 or later, this software is required to see the Simple viewer software in the Mac.

Noritsu CD-R Engine (Windows/Mac)

Software version which is compatible or will be compatible with Noritsu CD-R Engine (Windows/Mac)	
QSS-2701D	Not supported
QSS-2801D	Ver.G001 or later
QSS-2901D	Ver.E001 or later
QSS-3001D	Ver.E001 or later
QSS-3101D	Ver.C001 or later
QSS-32,33	The limited shipment Ver. or later

Explanation

- As for the QSS-32, it is unnecessary to install the Mac CD because the CD-R Engine (Windows/Mac) is not available.
- As for the QSS-32, Noritsu CD-R Engine (Windows/Mac) only is available.
- Refer to the PC Manual [Procedure for installing the CD-R Engine] for the Noritsu CD-R Engine (Windows/Mac) installation.

3130

33_3

CD Viewer Utilities

Software that edits display for the CD Viewer

You can set the customer's shop information and logo data.

Simple Viewer Software and Deluxe Viewer Software are common.

Install the software from "CD_Viewer_Utility" folder in the system program CD of each machine.

Explanation

- There is no additional information.

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3140

33_3

Setting of the CD-R/RW writing

- When writing to the QSS CD

  Set in the “Image Save” of “Operator Selections”.

  Refer to the "Viewer Software Selection" in Operator's Manual (Additional Operations&Setup Manual) for more details.

- When writing the generic CD-R/RW

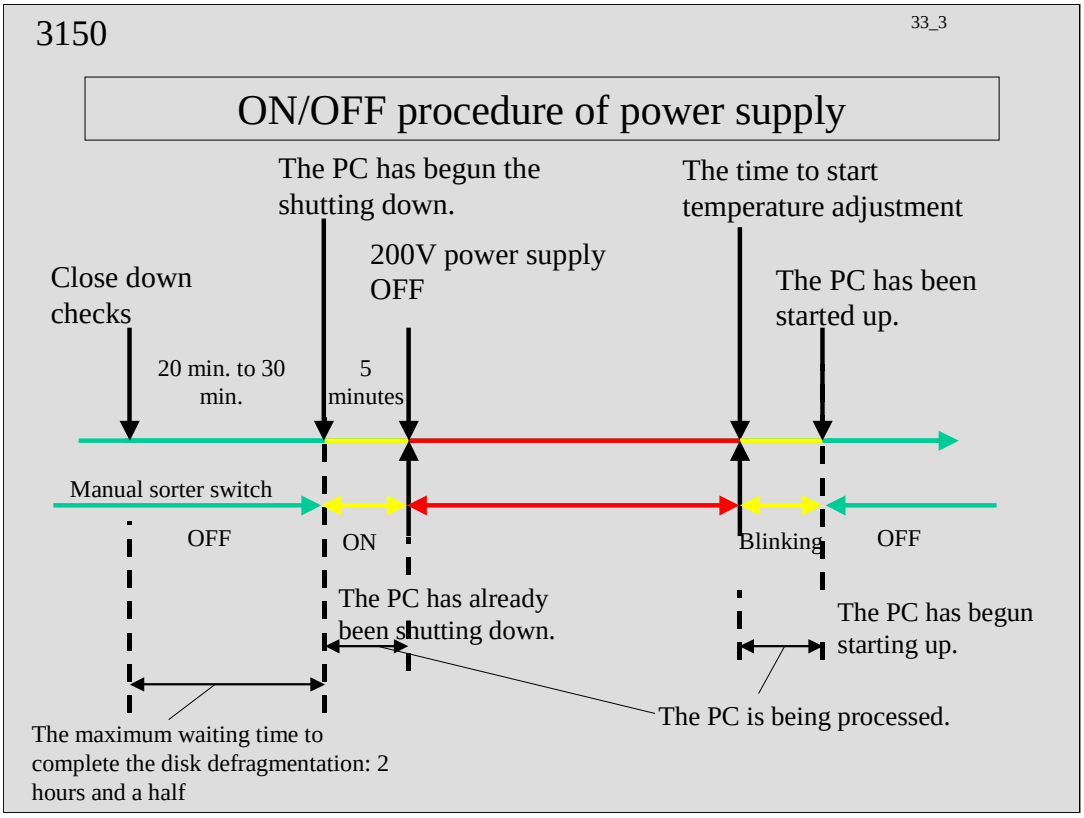
  Set in the “Image Save” of “Operator Selections”.

  Refer to the "Viewer Software Selection" in Operator's Manual (Additional Operations&Setup Manual) for more details.

  (The simple viewer software which is standard of this product is set in the initial setting.)

Explanation

- It is possible to set the "Deluxe Viewer" when the "CD-R Engine (Windows/Mac)" is installed.
- As for the registration of “shop data”, refer to the “CD Viewer Utility software” Operator’s Manual.


3150
33_3
ON/OFF procedure of power supply
The PC has begun the shutting down.
The time to start temperature adjustment
200V power supply OFF
Close down checks
The PC has been started up.
20 min. to 30 min.
5 minutes
Manual sorter switch
OFF
ON
Blinking
OFF
The PC has already been shutting down.
The PC has begun starting up.
The PC is being processed.
The maximum waiting time to complete the disk defragmentation: 2 hours and a half

Explanation

- Refer to the Getting Started [Closing down the machine with the program timer], [Closing down the machine without using the program timer] for details of the normal shutdown movement.
- Refer to the Getting Started [Stating the machine when the temperature adjustment has been done], [Starting the machine when nothing is shown on the display] for details of the normal start up movement (When the program timer is activated.).
- Refer to the Troubleshooting Manual [Turning off the power supply for troubleshooting], [Turning on the power supply after troubleshooting] for details of when turning the breaker OFF in the case of troubleshooting, etc.
- Refer to the Troubleshooting Manual [Restarting the machine when it freezes up] for details about how to turn OFF the breaker when the PC has been freezing.
- Refer to the Troubleshooting Manual [Turning off the power supply in an emergency] for details about how to turn OFF the breaker in an emergency.
- Refer to the Service Manual [68550] for details of when the PC does not start up (error).

3320

33_3

Status display of the processor

Status lamp of processor	Condition of display	Description
Lighting Green	The temperature adjustment is completed.	
Blinking Green	During the Program timer (From “After the close down checks is completed.” to “The time to start the temperature adjustment”)	**Slow blinking**
Blinking Red	When it is impossible to activate the temperature adjustment (When the error occurs or the interlock switch is activated.)	**Slow blinking**
Dark	The processor section does not start-up. During the temperature adjustment	

Sorter switch	**Condition of display**	**Description**
Dark	The PC is being functioned.	
Blinking	While the PC is being started-up.	**Slow blinking**
Lighting	During the program timer or the power supply of PC is turned OFF.	

Explanation

- There is no additional information.

3330

33_3

Status display of the scanner

Ready lamp	Condition of display
Lighting Green	Films can be processed. (You can insert a film.)
Blinking Green	Film is being processed. (You cannot inset a film).
Blinking Red	Films cannot be processed.(You cannot process a film.) • The error occurs. (You cannot process a film.)
Dark	Films cannot be processed.(You cannot process a film.) • When the “Film” is not selected for “Image input” in the print channel setting. • During the start-up checks and close-down checks • During the Program timer • When the message “Insert a film.” does not appear on the adjustment mode. • During the initial movement

Explanation

- There is no additional information.

3340

33_3

Details of the back print

- When making prints from except the IX240 film
- When making prints from the IX240 film
- Back print of the print from the storage media
- Back print of the combined print
- Back print when using the CAU

Explain, checking the Operator's Manual - Basic Operations - [Checking back prints].

Explanation

- There is no additional information.

3370

33_3

Types of index prints

Normal index prints	Make normal index prints. The data for displaying on the PJP mode is used.
Label Index	Index print for the media case size of storage media The digital camera media such as the SmartMedia, CompactFlash, etc are not available.
Contact print	**Make the contact print.**

Explanation

- The pre-scanning data is used for the output of index print.
- The pre-scanning data is enlarged and prints are made.
- Index logo data size

  When you make the original logo data;
  Image size: 164 x 494 pixels
  Saving format: bitmap (bmp)

Note

- When processing the contact print, the negatives and positives of 120/110 are printed in the same format as the 135F.

3380

33_3

Index print sizes (135/240 films)

- Normal index prints 135/240 films

x: Available

-: Not available

***1:** Printing is possible, but a whole of the image does not appear on the print.

Format	Paper size (mm)	135 films		240 films		
		28-frame	40-frame	15-frame	25-frame	40-frame
3HS	82.5 x 158	-	x	-	-	-
3R	89 x 127	x	x	x	x	x
3HD	89 x 158	x	x	x	x	x
3W	89 x 178	-	-	x	x	x
3WS	89 x 178	x	x	x	x	x
4R	102 x 152	x	x	x	x	x
4HD	102 x 178	x	x	x	x	x
5R	127 x 178	x	x	x	x	x
6R	152 x 203	x	x	x	x	x
6HD	152 x 254	x	x	x	x	x
6W	152 x 305	x	x	x	x	x
8RS	203 x 254	x	x	x	x	x
8R	203 x 305	x	x	x	x	x
8HD	203 x 356	x	x	x	x	x
CD_40	120 x 120	-	x	-	-	*1
CD_40A	89 x 120	-	x	-	-	*1
CD_40B	102 x 120	-	x	-	-	*1
3WL	89 x 254	x	x	x	x	x

Explanation

- There are 3 types of Index print sizes for CD.
- 135 film restrictions

  When selecting 3HS, CD_40/40A/40B, it is printed in 40-frame format.
- 240 film restrictions

  When selecting CD_40/40A/40B, it is printed in 40-frame format.

  But, a whole of the image does not appear on the print because the aspect ratio is not constant.

Note

- 110 film restrictions

  Same with the restrictions of 135 films. But, a whole of the image does not appear on the print because it is printed in 135 format.
- Media

  Same with the restrictions of 135 films. But, a whole of the image does not appear on the print because the aspect ratio is not constant.

3390

33_3

Index print sizes (120 films)

Normal index prints

120 films

-: Not available

***1:** Printing is possible, but a whole of the image does not appear on the print.

***2:** Printing is possible, but the logo data is not printed.

6*4.5, 6*6 :18-frame format

6*7, 6*8, 6*9 : 12-frame format

Format	Paper size (mm)	Index	
		12-frame	18-frame
3HS	82.5 x 158	*1	*1
3R	89 x 127	*1	*1
3HD	89 x 158	*1	*1
3W	89 x 178	-	-
3WS	89 x 178	*1	*1
4R	102 x 152	*2	*2
4HD	102 x 178	*1	*1
5R	127 x 178	*1	*1
6R	152 x 203	*1	*1
6HD	152 x 254	*1	*1
6W	152 x 305	*1	*1
8RS	203 x 254	*1	*1
8R	203 x 305	*2	*2
8HD	203 x 356	*1	*1
CD_40	120 x 120	*1	*1
CD_40A	89 x 120	*1	*1
CD_40B	102 x 120	*1	*1
3WL	89 x 254	*1	*1

Explanation

- There are 3 types of Index print sizes for CD.
- 120 film restrictions
  - When selecting [4R], [8R], the logo data is not printed.
  - When selecting 4R, 8R, the number of frames to be printed is different.

    Film size 6 x 4.5, 6 x 6: 18-frame format

    Film size 6 x 7, 6 x 8, 6 x 9: 12-frame format
  - When selecting the size except [4R] and [8R], it will be printed in 28-frame and 40-frame format and a whole of the image does not appear on the print.
  - When selecting CD_40/40A/40B, it is printed in 40-frame format, and a whole of the image does not appear on the print.

3400

33_3

Background color for index prints

- **The color can be selected as a background color of an index print.**

1. Gray
2. White
3. Pink
4. Yellow

Black is for the contact print.

9. Black

5. Orange
6. Green
7. Light blue
8. Purple

Explanation

- Select the background color for [135/120/110/Media], [IX240] and [contact print] for each.

3410

33_3

Label index prints

Types of media	FD	MO	ZIP	CD/DVD/HD
Size	89 x 114	89 x 117	97 x 120	120 x 120 (12 cm CD's) 80 x 85 (8 cm CD's) 89 x 120* 102 x 120*
Format (number of frames)	6, 20, 35	6, 20, 35	6, 20, 35	40
Index logo	Used	Used	Used	Used
Description	The number of frames are switched automatically.	The number of frames are switched automatically.	The number of frames are switched automatically.	The number of frames are fixed.

*:
[89 x 120] or [102 x 120] is selected automatically.
When the magazine with 102 paper width is not set: [89 x 120]
When the magazine with 89 paper width is not set: [102 x 120]

Explanation

- The label index is made automatically at the same time of saving the images to media.
  However, you can set "None" for the label index print.
- When the paper width is larger than the print size, the image is centered, so the unexposed part appears on both sides of the print.
- The size of Label index prints for CD are switched automatically according to [CD type] setting which is selected in [Option Registration] → [Media] → [CD-ROM (CD-R/RW)].
  And, the size of Label index prints for Business card CD's and other uniquely shaped CD's are also the same.

3420

33_3

Index print sizes for contact print

Paper sizes for 4-frame

Name	CP4_1	CP4_2	CP4_3	CP4_4	CP4_5	CP4_6	CP4_7	CP4_8	CP4_9
Paper width (mm)	82.5 or more	82.5 or more	120 or more	152 or more	152 or more	152 or more	152 or more	152 or more	152 or more
Paper Advance Length (mm)	152	152	152	152	190.7	226.9	263	300	335.5

Paper sizes for 6-frame

Name	CP6_1	CP6_2	CP6_3	CP6_4	CP6_5
Paper Width (mm)	82.5 or more	82.5 or more	120 or more	165 or more	203 or more
Paper Advance Length (mm)	228.6	228.6	228.6	228.6	228.6

Paper advance length: Size when printing with minimum paper width

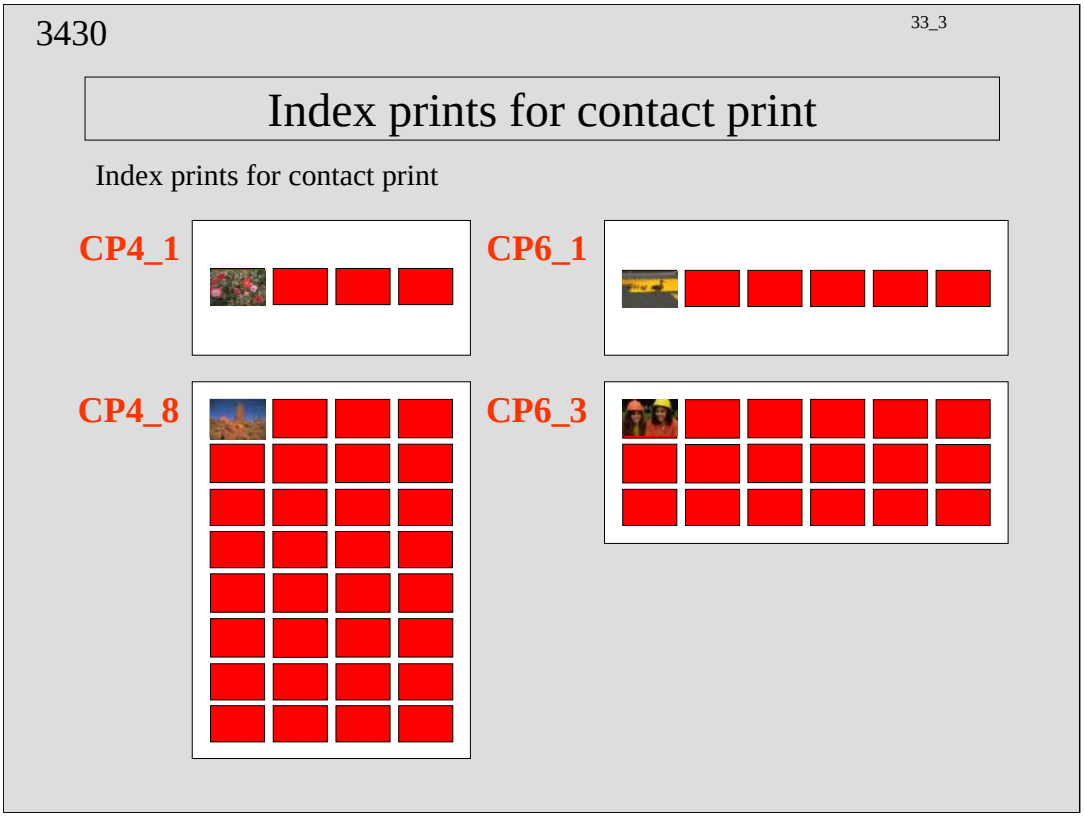
135/110/120 only are available.

Explanation

- The frame (format) of contact print can be selected in the Index setting of print channel.
- When making contact print style photos with 120/110 films, the print is made with 135F format.
- It is possible to read the frame data of contact print style photos.(Bitmap, 3632 x 549 pixels)

Note

- CP of CP4_1 stands for Contact Print Style Photos.



Explanation

- As for the contact print, the following types are available for each machine.

  Contact print with 4-frame:

  QSS-28: (1-line to 8-line)

  QSS-30: (1-line to 11-line)

  QSS-30/33: (1-line to 9-line)

  Contact print with 6-frame:

  QSS-28: (1-line to 3-line)

  QSS-30: (1-line to 7-line)

  QSS-30/33: (1-line to 5-line)

- The contact print is not available for IX240.
- In the contact print, the printing direction (horizontal or vertical) is changed, depending on the paper width.

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3440

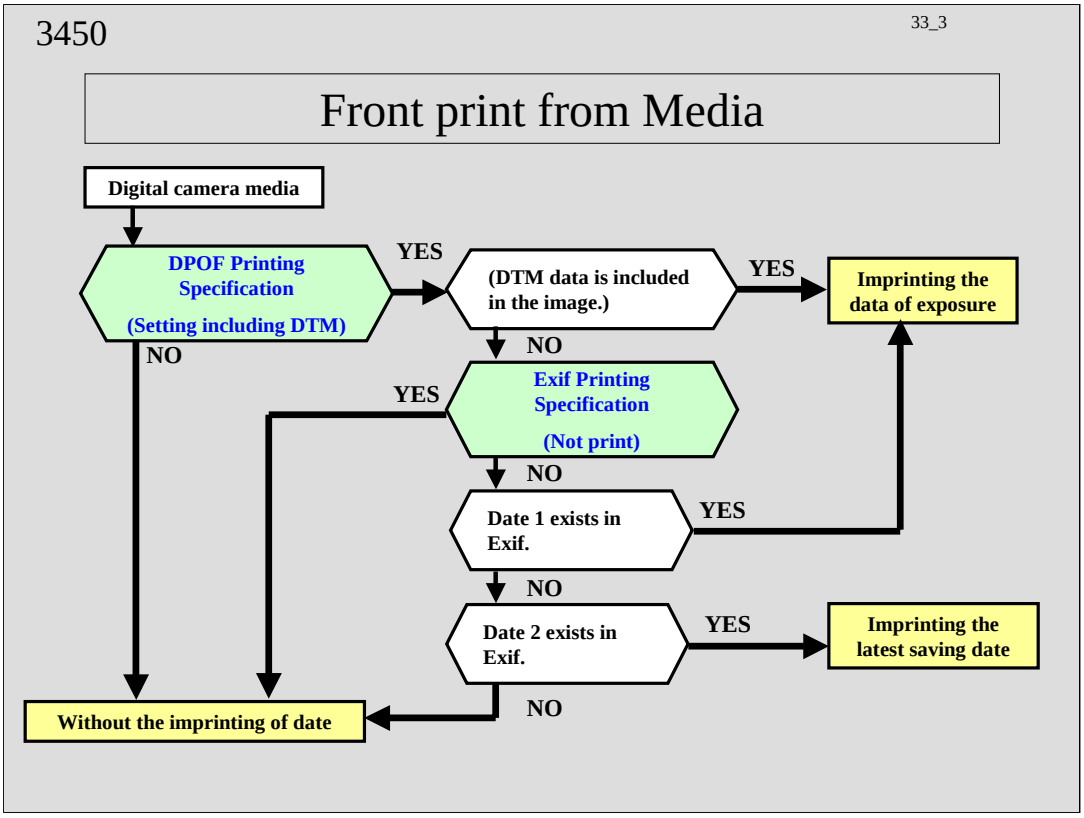
33_3

Practical training

- Carry out the close down checks.
  - How to exit from the close down checks mode
  - How to finish the application
  - When executing the close down checks, make sure to finish after setting the lane of the 135/240 AFC-II to the 135 lane.

Explanation

- The disk defragmentation is completed in approx. 20 to 150 minutes.
- If you execute the disk defragmentation regularly, the required time to defrag can be shortened.



Explanation

- Refer to the Operator's Manual - Additional operations - for "Setting the Front Print".
- Even when the front print setting is ON, the front print is not imprinted if there is no applicable DPOF data.It is, however, possible to print the date of the Exif data in the image data when selecting "Print" for the Exif Printing Specification.
- [DTM] : {DATA TIME}, data of date of exposure
- Date 1 (Exif) : {Data Time Original}, data of date of exposure
- Date 2 (Exif) : {Data Time Digitized}, date of edit by Photoshop, etc.

3460

33_3

Comprehension check

[Operations]

- Can you explain the display contents of [ORDER] screen?
- Can you explain how to copy the data to the media?
- Can you explain the cautions in handling the SmartMedia or CompactFlash?
- Can you explain how to create the Frame Print?
- Can you explain how to make ID Photos?
- Can you explain the start up checks and close down checks?
- Can you explain the procedure of daily setup?
- Can you explain how to turn ON and OFF the power supply?
- Can you explain Noritsu CD-R Engine (Windows/Mac)?
- Can you explain about the specifications and the operational method of the Compact Archive?

[Question]

- Explain the meaning of each icon in the [ORDER] display.
- Copy the data in the CF to the CD.
- Images in the Smart Media often disappear or can be damaged. What is the caution for dealing with this matter?
- Explain the procedure of changing frames for each image by the 6-frame PJP.
- Explain how to make ID photos.
- Explain weekly maintenance of upper turn racks and squeeze rack.
- What is procedure of the daily set up for shortening the time if there are several paper types?
- There are certain problems in printing process.You want to reset the power supply.What is the procedure at this time?
- Keyboard and mouse do not work.You want to reset the power supply.What is the procedure at this time?
- A Rack is making the noise because of the paper jam in the processor.What is the procedure at this time?
- What tool is necessary for making a Deluxe Viewer CD?

33_4

Chapter 4
Installation

Explanation

- There is no additional information.

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The point of this chapter

Key points

- Study the installation of the machine.

  Width for carrying a machine, Space for installation, Packing items, PC peripherals, Allocation of drives, Setting the language specification

Upon completion of the lesson, you will be able to:

- Understand the width for carrying a machine and space for installation and judge whether it is possible to bring a machine to a customer's shop.
- Understand the packing parts and judge whether all parts are prepared in the installation.
- Understand the angle brackets to be removed in the installation and the parts to be attached, and work smoothly.
- Execute the following things.
  - Setting of language specifications, Each setting after attaching each drive, Allocation of drives -

How to proceed the training

- The trainer will provide an oral explanation of the cautions, referring to "Installation Manual" and a machine.
- Carry out the mechanical adjustment or installation of options in another chapter.

  You do not carry out the practical training here.

4010

33_4

The width to carry a machine

Unit : mm

System name	Minimum height	Minimum width
LPP-1300	1226	760

Explanation

- There is no additional information.

4020

33_4

Packing items (S-2)

Packing parts	
S-2 main body	Film Cleaner Mount (2)
Film cleaner kit (option)	

Packing items (135/240 AFC-II)

Packing parts	
135/240 AFC-II main body	Cleaning leaders
IX240 film adaptor	135 film loading guide
Curled film setting roller	

Explanation

- There is no additional information.

4055

33_4

Packing Items 1 (LPP-1300)

Packing parts	
LPP-1300 main body	Monitor
Air filters	Mouse pad
Capacity booster A	Monitor hood (option)
Ribbon cassette (option)	Calibration plate
Sample print	Standard accessories
CVP (Option)	Hinge 1, hinge 2, connector cover
Monitor mount	

Explanation

- There is no additional information.

4056

33_4

Packing Items 2 (LPP-1300)

Packing parts	
Standard accessories (chemical filters, control strip holder, etc.)	*
Print conveyor unit	Print sorter unit
Anti-contamination cover (option)	

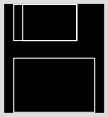
Explanation

- There is no additional information.

4060

33_4

Packing items (accessories) (1)

Types	Name		Description
	INITIAL DATA1	Input related data	Contains the adjustment data for each machine
	INITIAL DATA 2	Printer/exposure related data	
	INITIAL DATA 3	Processor related data	
	INITIAL DATA4	Scanner/film carrier related data	

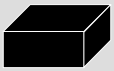
Explanation

- INITIAL DATA 1/2/3/4 may not be included in the packing parts depending on the model.
- Refer to the Service manual [Reading and Writing Data] for details.

4061

33_4

Packing items (accessories) (2)

Types	**Name**	Description
	SYSTEM PROGRAM	Contains the necessary system files to activate the system
	PROFILE DATA	Contains the profile data
	PC attachments	Operator's Manuals, Driver Software, etc. Necessary for the maintenance of the PC attachments

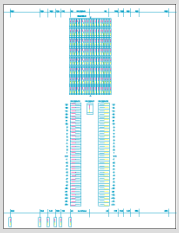
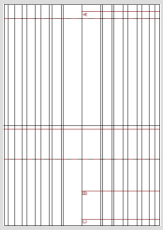
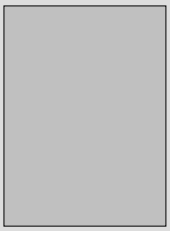
Note

- Recovery CD for OS is in a storage space for the recovery CD.
- Storage Space of QSS-32 Series:Bottom Part of the Computer
- Storage Space of QSS-33 Series:Rear End of Magazine Mount A

4070

33_4

Packing items (Sample prints)

Adjustment mode	Exposure zoom rate correction Exposure Position Adjustment Exposure zoom rate fine adjustment	Arm Unit Zigzagging Correction	Test print for checking the image quality	Gray test print
Attached print				
Description	203 x 355.6: 1	4 (89 x 356) prints and 4 (203 x 356) prints for each lane (A and B) = 8 (total)	203 x 356: 1	203 x 356: 1

Note

- The number of the necessary test print is 4 for the Arm Unit Zigzagging Correction when not equipping with the dual paper magazine.

4080

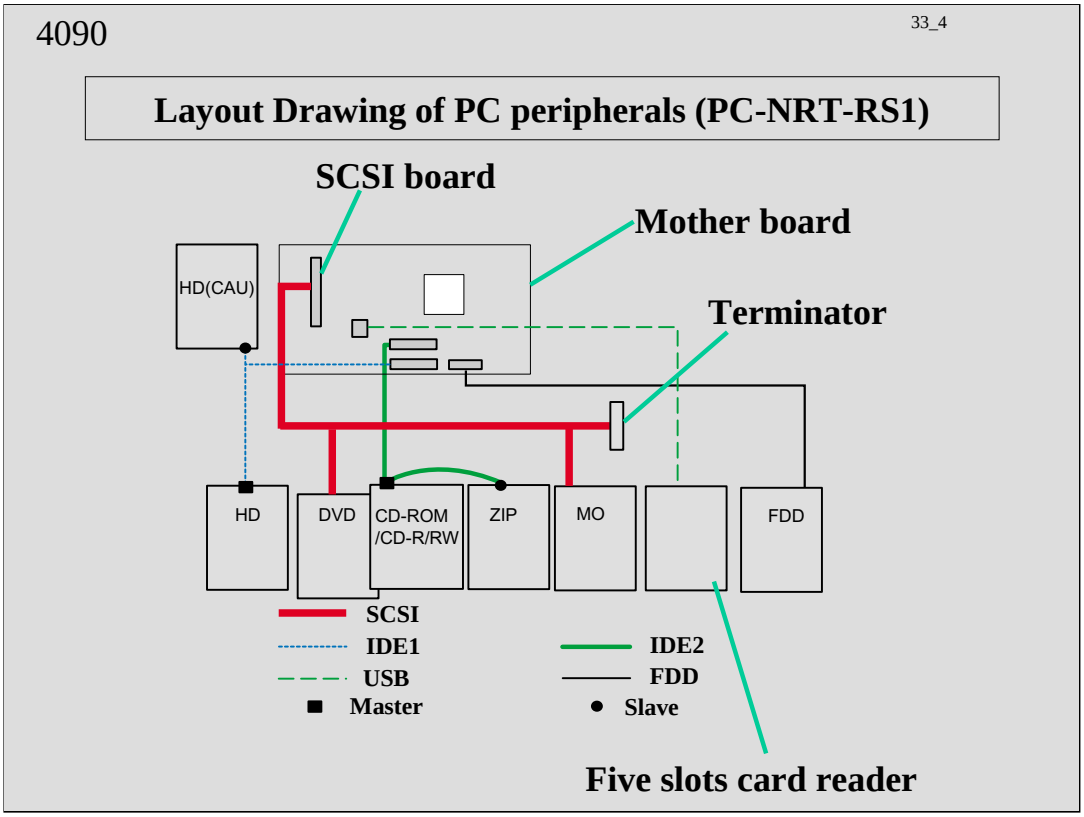
33_4

Practical training

- Install a machine, referring to the Installation Manual.

Explanation

- There is no additional information.



Explanation

- If you order an option in advance, it is assembled before shipment.
- If you install options on site, carry out ”Media setting” of “Option registration”.

4100

33_4

SCSI ID No. (PC-NRT-RS1)

Drive	PC-NRT-RS1
	ID No.
MO	0
EPSON A3 Flatbed Scanner	5
DVD-RAM	6
SCSI board	7
CD-ROM, CD-R/RW	-
ZIP	-
HD	-
FD	-
EPSON A4 Flatbed Scanner	-

Explanation

- When connecting the EPSON A3 Flatbed Scanner (which the customer must furnish by themselves) to the QSS via a SCSI cable, it is necessary to set scanner at SCSI ID 5.
- The followings are the drives that the SCSI connection is not used.

  CD-ROM, CD-R/RW: IDE (Secondary/Master)

  ZIP: IDE (Secondary/Slave)

  HD (standard): IDE (Primary/Master)

  HD (CAU): IDE (Primary/Slave)

  FD: FD connector

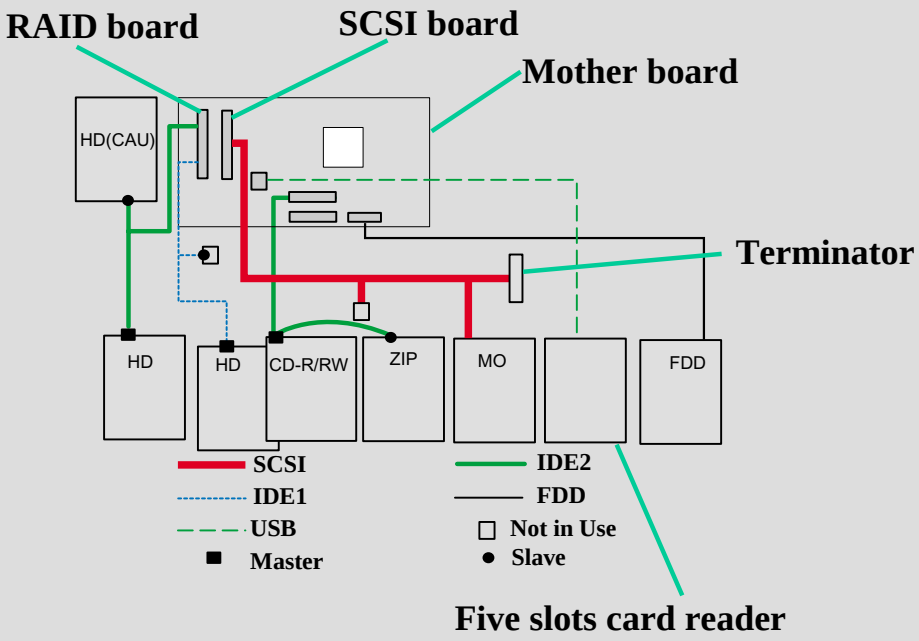
  Five slots card reader: USB

  Flatbed scanner: USB

4110

33_4

Layout Drawing of PC peripherals (PC-NRT-RS3)



Explanation

- If you order an option in advance, it is assembled before shipment.
- If you install options on site, carry out ”Media setting” of “Option registration”.

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4120

33_4

SCSI ID No. (PC-NRT-RS3)

Drive	PC-NRT-RS3
	ID No.
MO	0
EPSON A3 Flatbed Scanner	5
SCSI board	7
RAID board	-
CD-R/RW	-
ZIP	-
HD	-
FD	-
EPSON A4 Flatbed Scanner	-

Explanation

- When connecting the EPSON A3 Flatbed Scanner (which the customer must furnish by themselves) to the QSS via a SCSI cable, it is necessary to set scanner at SCSI ID 5.
- The followings are the drives that the SCSI connection is not used.

  CD-R/RW: IDE (Secondary/Master)

  ZIP: IDE (Secondary/Slave)

  HD (standard): IDE (CH1/Master)

  HD (standard): IDE (CH2/Master)

  HD (CAU): IDE (CH2/Slave)

  FD: FD connector

  Five slots card reader: USB

  Flatbed scanner: USB

4130

33_4

Cautions when attaching the PC peripherals on site

Drive	Installing the driver	Setting and Check of the SCSI ID and IDE jumper switch
ZIP	Necessary	Necessary
MO	Unnecessary	Necessary
CD-ROM, CD-R/RW	Unnecessary	Necessary
DVD-RAM	Necessary	Necessary
Five slots card reader	Necessary	Unnecessary
Flatbed scanner	Necessary	Necessary (EPSON A3 Flatbed Scanner)
		Unnecessary (EPSON A4 Flatbed Scanner)

As for the CD-R External Writing System, the details are mentioned in the CD-R External Writing System Training Material.

Explanation

- Pull out the USB code connected to the flatbed scanner and 5 slots card reader when installing the driver software.
    - If connecting USB code when the driver is not installed, the OS installs general driver. Therefore, be sure to install the driver with removing the USB code.
- Do not install the application software other than the driver software in the driver CD when installing the driver of the Flatbed Scanner from EPSON (which the customer should furnish).It may cause the malfunction of QSS.

4140

33_4

Allocation of drives

- The drive letter differs depending on the installation order of the drive.
- Set the drive allocation in the “Media setting” of “Option registration” by the drive letter of OS.

  If you set the wrong drive letter, the malfunction occurs. (e.g. it accesses to the wrong drive.)

  Be sure to set the drives correctly. Set the same drive with the drive letter of OS.
- The drive letters below are fixed.
  A: FD C: Hard disk Z: CD-R External Writing System
- Refer to the PC Service Manual for the allocation of drives.

Explanation

- After executing the Recovery, confirm the allocation of drives.
- ‘How to check the allocation of Five slots card reader drive’ is different from the case of other drives.

  Select [Explore] of [My Computer].Click an icon of each drive.Check that the lamp of each inlet is blinking.

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4150

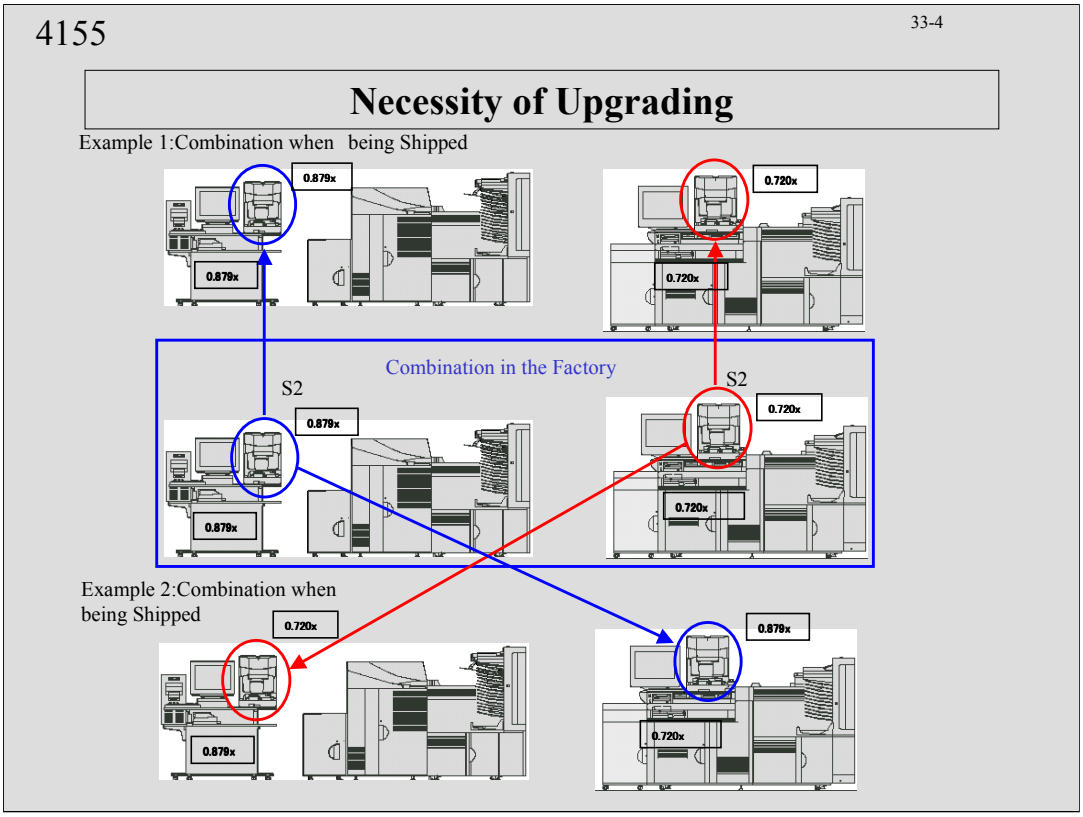
33_4

Setting the language specifications

- When you use in the other languages except English, it is necessary to set the dictionary of language which is to be used. And install the translated QSS message data.
- *
- When the various kinds of functions (e.g. postal code dictionary) are necessary, carry out the setting again.

Explanation

- There is no additional information.



Explanation

- Necessity of Upgrading QSS 32 and 33 Series
- When building machines, the S2 of the QSS-32 can be attached to the QSS-33 or the S2 of the QSS-33 can be attached to the QSS-32 after the final test on the S2 for the QSS-32 and 33.(Refer to the illustration above)
- Due to the reason above, it is necessary to upgrade the QSS-32 and/or 33 with the enclosed CD when the service personnel installs them.
- Following is an example of the problem caused by non-upgrading of the machine during the installation.
- The Example of the Problem: The system error No.6429-4001 (AFC/Scanner Control PCB) occurred when attaching the MMC-2 after the installation of the QSS-33. Service Personnel replaced the Scanner Control PCB to solve the problem.
- Cause of the Problem: Versions of the D-ICE Control PCB in the QSS-33 and the Scanner Control PCB in the S2 did not match.
- Details: The prescanning magnification of the MMC-2 was at 0.879-fold when installing the system program of the QSS-32 on the AFC/Scanner Control PCB of the S2.The prescanning magnification of the MMC-2 was at 0.720-fold when installing the QSS-33 system on the D-ICE Control PCB of the QSS-33.

  Although the AFC/Scanner Control PCB ordered the D-ICE Control PCB to set its magnification for the prescanning at a 0.879-fold, the D-ICE failed to adjust to it because the prescanning magnification of the MMC-2 was not at a 0.720-fold. This was why the error No.6429-4001 System Error (AFC/Scanner Control PCB) occurred

4160

33_4

Comprehension check

[Installation]

- What is the minimum size of shop entrance so that you can carry a machine without removing the table?
- Do you understand what kinds of packing parts there are?
- Do you understand the places of angle brackets and units to be installed?
- Do you understand that the specification of language can be changed?
- Do you understand how to measure the ground resistance?
- Did you understand how to adjust the jack bolt on the bottom side of the dryer rack?
- Did you understand the location of the Leak Circuit Breaker and the function?

[Question]

- The shop owner said to you “Move a machine so that the back side of machine is as close as possible to the wall”,What should you do?
- What packing item should be attached to a machine?
- Where are the angle brackets?
- For the availability of Spanish or French, what should you do?
- Do you measure the grounding resistance of the S-2 and the PP after you connect LVDS between S-2 and CS, and between CS-1 and LP? Or do you measure it before you connect them?

33_5

Chapter 5
Setup

Explanation

- There is no additional information.

5000

33_5

The point of this chapter

Key points

- Study about the setup.

  Setup in the installation, Data configuration, Setup flow, Print channel setting, Monitor setup, CMS, Profile

Upon completion of the lesson, you will be able to:

- Prepare for the setup.
- Execute the Scanner light source registration/Focus adjustment.
- Execute the Monitor setup.
- Understand the initial setup flow and its theory.
- Execute the Paper specification registration/Magazine registration.
- Set Print channels.
- Input the appropriate correction (color, DSA).

How to proceed the training

Carry out the practical training, or explain the items using the sample prints.

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5010

33_5

Setup when installing a machine

- There are two patterns of setup procedure when installing a machine to shorten the installing time.
  There are two procedures for the conditions below.
  During the temperature adjustment
  After the temperature adjustment is completed
- As for the setup except when installing a machine, it is not always necessarily to follow the procedure.
  Refer to the Service Manual [70010], [70020].

Explanation

- There is no additional information.

5040

33_5

Details of initial setup

1. Setting the exposure amount (completed in 1 time)

   The difference of color characteristics (paper + solution + light amount) for each machine is corrected, and set the parameter to get the target density.

2. Paper gamma setup (maximum: 3 times)

   Using the data which was estimated in step 1, make a 22-step test print and set the parameter to get the target density.

3. Black balance adjustment (completed in 1 time)

   Adjust the color balance around the black letter on the white background (hypochromic background) or the color balance of the white letter on the black background automatically with the images inputted a letter.

Explanation

- When starting the setup without reading the initial data, the initial data which has already been registered is used.
- The initial setup time will take within 1 hour (approx. 35 to 40 minutes).

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5040

33_5

4. Printer profile calibration (complete in 1 time)

Carry out the printer color matching for each paper type.This is carried out based on the profile data which has already been registered.

NOTE

•The 1st test print: 22-step setup print
The 2nd test print: 22-step setup print
The 3rd test print: 20-step setup print

Explanation

- The printer profile is not set for each chemical specification.
- When the new paper type is released, the profile on CD will be released.

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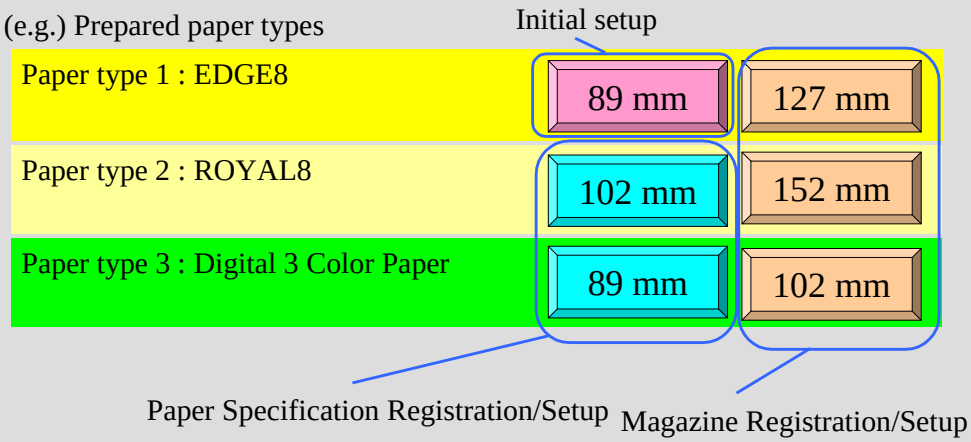
5050

33_5

Setup flow

The setup flow at the installation is explained here.



Explanation

- The paper type for the initial setup or Paper Specification Registration will also be used for the daily setup.

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5060

33_5

Monitor setup

1. Monitor brightness adjustment
   - Color and temperature setting 6500K (D65)
   - Contrast adjustment
   - Brightness adjustment

Adjust it, referring to the Operators Manual of the display monitor.

Adjust the color of monitor here.

Explanation

- When adjusting the monitor, carry out the monitor brightness adjustment and check the color matching between the monitor and the test print from the viewpoint of actual operation.
- When installing the machine or carrying out the monitor adjustment from the first step, carry out the monitor adjustment by selecting [All].Also, when you want to adjust the color of the monitor a little, adjust it by selecting [Only Color Adjustment Pattern].
- As for the paper type selection, you can choose any paper type if the setup is completed.
- Monitor color adjustment procedure
  Checking the color of the whole monitor comparing with the test print → Contrast → Brightness → Color adjustment after adjusting the contrast and brightness → Color adjustment of highlight area → Color adjustment of shadow area
- After finishing the monitor color adjustment, make a print from media and check the color matching between the print and the PJP screen.If the adjustment is necessary, readjust the color of the whole monitor.

Note

- When outputting the test print for the monitor adjustment, the DSA correction is not effective, but the temperature change correction and balance memory correction of paper setup are effective.
- When the monitor setup is completed, the file of the gamma data is updated. Also the file of the gamma data is held in the HDD and the file is sent to the video board.
- Refer to the Operator's Manual - Additional Operations & Setup Manual - "Adjusting the color of the image on the display monitor [Monitor Setup]" for details of the monitor setup.

5060

33_5

2. Monitor setup

The difference occurs between the color of print and that of monitor, depending on the light source of the place where you work.

Improve the precision of color matching by setting the color difference freely.

Make a test print, and compare the color chart with the monitor and adjust it.

Note

- When installing the profile CD, the monitor adjustment and printer profile adjustment are necessary in some cases.

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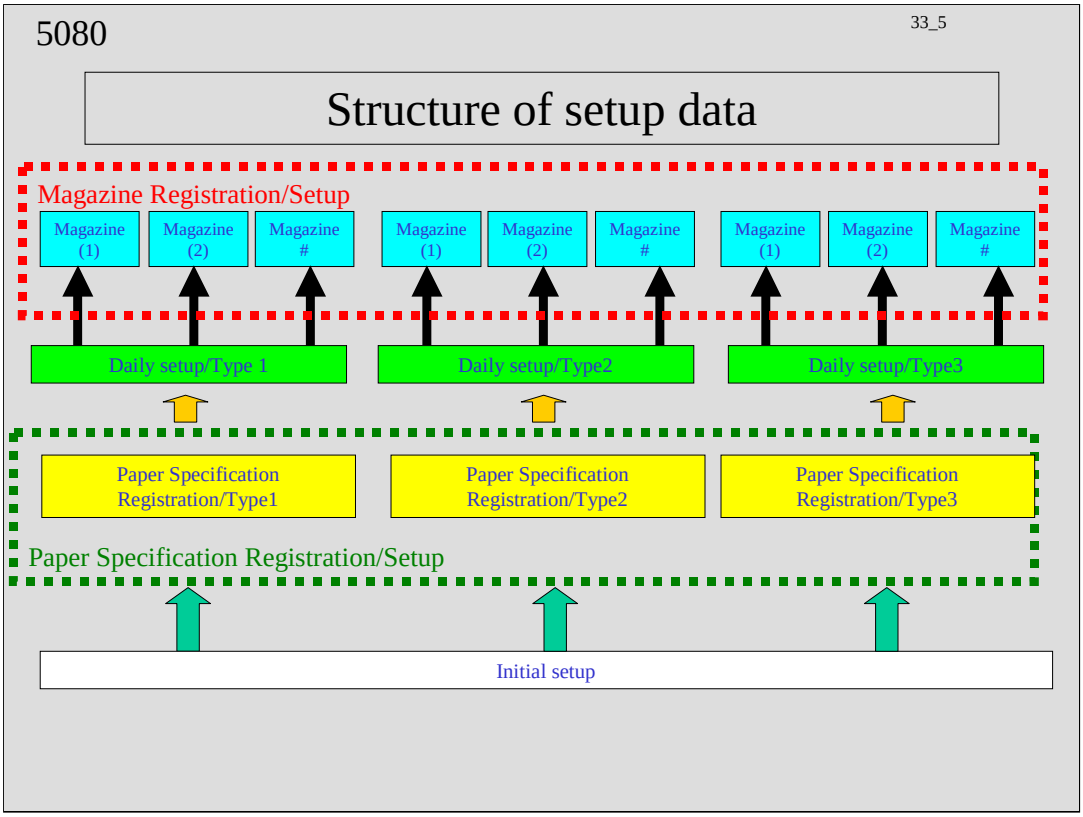
Initial setup (Practical training)

- Carry out the initial setup.
  Initial setup
  Paper Specification/Registration Setup
  Magazine Registration Setup
- Monitor setup
- Making print channels

Making print channels

Explanation

- There is no additional information.



Explanation

- Execute the initial setup with the paper which a customer mostly uses.
- Execute the Paper Specification/Registration setup for all paper types which has been registered in the “Paper Specification/Registration”.(Except the paper type of which the Initial setup is executed)
- When registering several paper types, it is necessary to execute the daily setup for all paper types registered in the Paper specification registration setup.

5090

33_5

Paper registration and setup

Types of registration	Contents
Paper Specification Registration/Setup	Register the paper type and the magazine which are to be used.Up to 3 types can be set.
Magazine Registration Setup	When newly adding the paper with different paper width and different paper surface, register a new magazine and carry out the correction.
Emulsion number change	Correct this when the paper specification and the emulsion number is changed.
Paper setup	Carry out the color correction for each magazine.

Explanation

- The paper specification registration/setup is the setup when installing a machine. Carry out this also when adding a new paper with different specification.
- Make sure to turn [ON] the [High Density Setup Switch] ([Paper Specification Registration/Setup] → [Functions] → [Setup Switch] → [High Density Setup Switch]) when installing the machine
- You can check the setup status (“OK” or “-”) for each magazine in the following modes. Paper Specification, Magazine Registration, Emulsion number change
- You cannot carry out the “Emulsion number change” if the “Paper Specification/Setup”, “Magazine Registration/Setup” has not been completed yet.
- Regarding the Magazine Registration/Setup and the Daily Setup, it was conventionally not possible to set up other photosensitive materials when not completing the setup of the first photosensitive material.In contrast, the QSS-32 and 33 series have the added function that can perform printing test up to 3 (maximum) when using several types of papers or magazines.This shortened the time to perform the setup.
- Refer to the Service Manual 32510 for details of the paper specification registration/setup.
- Refer to the Service Manual 32520 for details of the magazine registration/setup.

Note

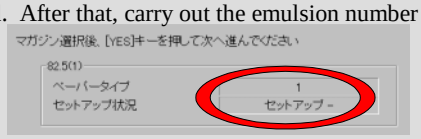
- Explain the meaning of the sign for setup status in the “Emulsion number change”.

5100

33_5

Emulsion number change

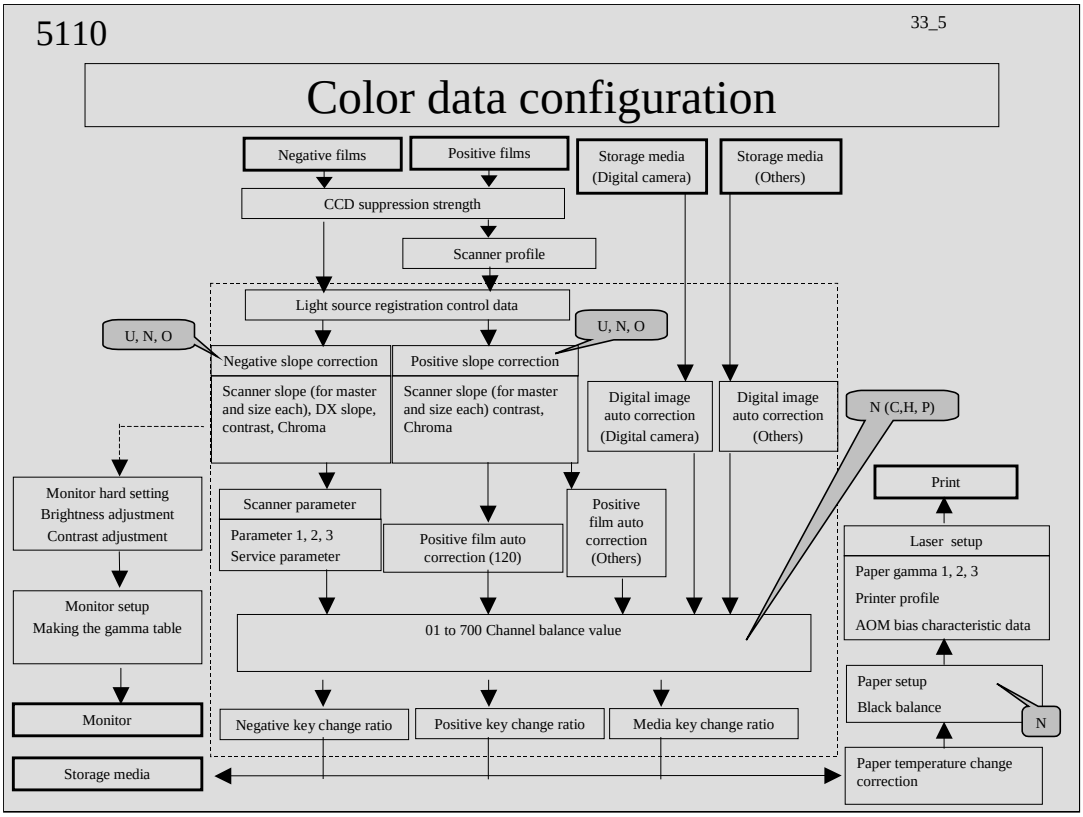
You can check the setup status which is used for emulsion number change. "OK" or "-" is displayed.
The emulsion number change is possible when “OK” is displayed for the paper setup or magazine registration.
In the other cases, set it so that “OK” is displayed. After that, carry out the emulsion number change.



Sign	
Setup -	[Paper Specification Registration Setup] has never been carried out or has not been completed yet.
Setup OK	[Paper Specification Registration Setup] has been completed successfully.
Magazine Registration -	Not to be registered in the [Magazine which is to be used for the setup]. Only [Magazine Registration] is carried out. But, [Magazine Registration Setup] has never been carried out or has not been completed yet.
Magazine Registration OK	Not to be registered in the [Magazine which is to be used for the setup]. Only [Magazine Registration] is carried out. And, [Magazine Registration Setup] has been completed successfully.
-	Both of [Magazine which is to be used for the setup] and [Magazine Registration] are not be carried out.

Note

- The setup status is controlled by each magazine.



Explanation

- Color data correction

  Film: Make a correction for the scanner slope.

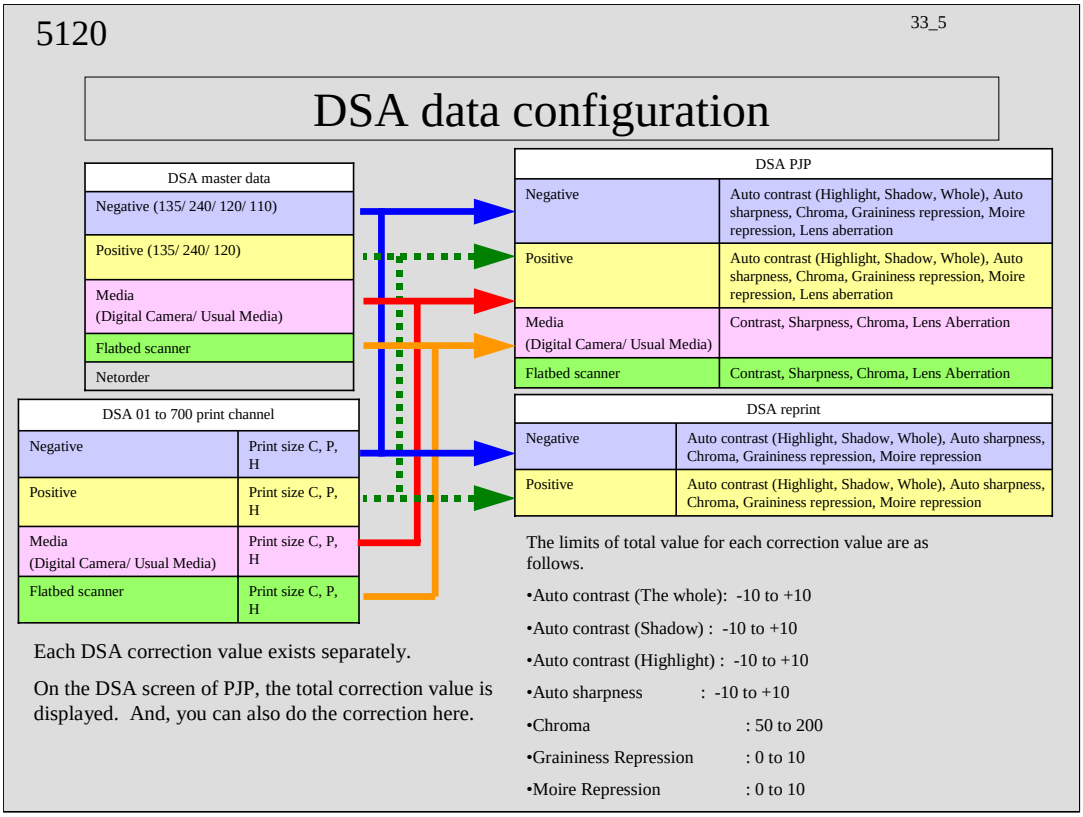
  Media: Make a correction for CH balance and set the channel only for media if necessary.

- Explain the contents of Parameter 1 and service parameter.

  Refer to the Service Manual [32590], [32500].

- The storage media is classified into following types.
  When the data is Exif : [Digital camera]
  When the data is other than Exif : [Others]

- As for the images scanned from FB scanner, [Digital Image Auto Correction] is not effective.

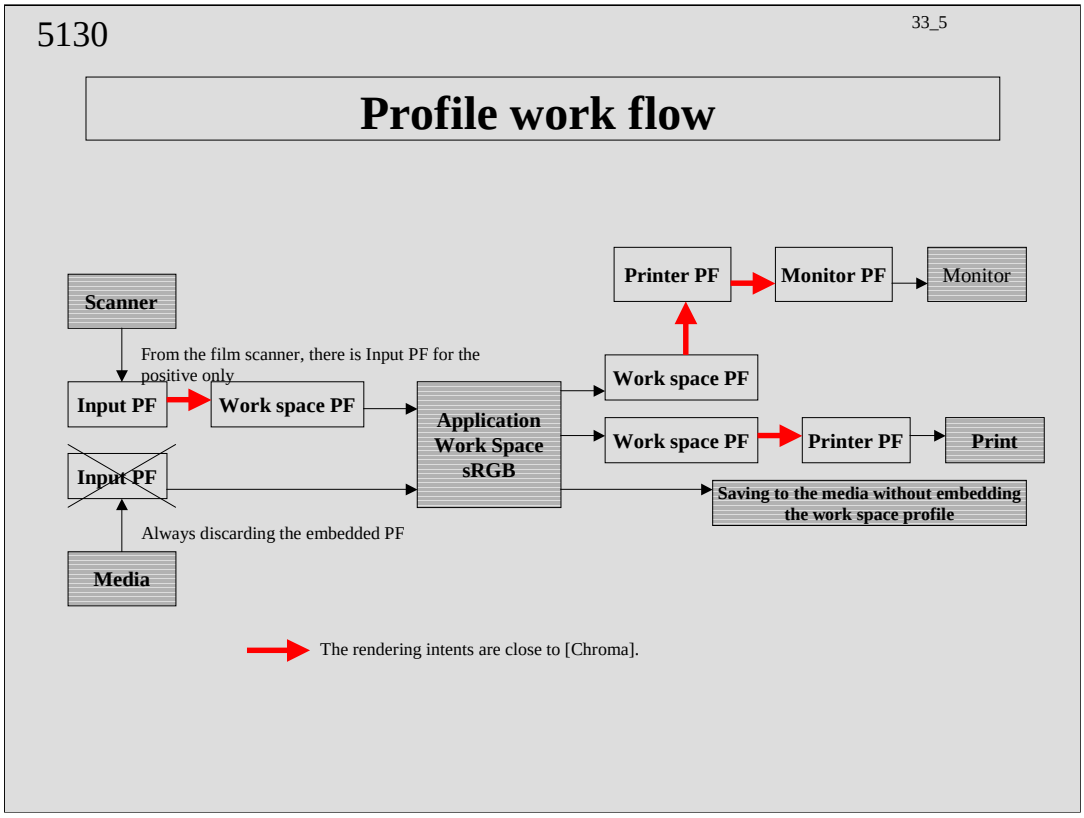

5120
33_5
DSA data configuration
DSA master data
Negative (135/ 240/ 120/ 110)
Positive (135/ 240/ 120)
Media
(Digital Camera/ Usual Media)
Flatbed scanner
Netorder
DSA 01 to 700 print channel
Negative
Print size C, P, H
Positive
Print size C, P, H
Media
(Digital Camera/ Usual Media)
Print size C, P, H
Flatbed scanner
Print size C, P, H
DSA PJP
Negative
Auto contrast (Highlight, Shadow, Whole), Auto sharpness, Chroma, Graininess repression, Moire repression, Lens aberration
Positive
Auto contrast (Highlight, Shadow, Whole), Auto sharpness, Chroma, Graininess repression, Moire repression, Lens aberration
Media
(Digital Camera/ Usual Media)
Contrast, Sharpness, Chroma, Lens Aberration
Flatbed scanner
Contrast, Sharpness, Chroma, Lens Aberration
DSA reprint
Negative
Auto contrast (Highlight, Shadow, Whole), Auto sharpness, Chroma, Graininess repression, Moire repression
Positive
Auto contrast (Highlight, Shadow, Whole), Auto sharpness, Chroma, Graininess repression, Moire repression
Each DSA correction value exists separately.
On the DSA screen of PJP, the total correction value is displayed. And, you can also do the correction here.
The limits of total value for each correction value are as follows.
•Auto contrast (The whole): -10 to +10
•Auto contrast (Shadow) : -10 to +10
•Auto contrast (Highlight) : -10 to +10
•Auto sharpness : -10 to +10
•Chroma : 50 to 200
•Graininess Repression : 0 to 10
•Moire Repression : 0 to 10

Explanation

- You can input the DSA master data for each kind of film for negative or positive.
- DSA master data for Media is roughly divided into "Digital camera" and "Normal media", and each has own DSA correction data.

  "Digital camera" indicates the input image of Exif format.

  “Usual media” indicates the input image of format except Exif.
- In case of Net order, the correction of Master data DSA only (e.g. Contrast, Sharpness, Chroma) is effective.“Print channel DSA”, “DSA PJP”, “DSA reprint” are not effective.



Explanation

- The platform which executes the CMS is the NKC original product.
  The printer uses the hardware to improve the processing capacity.
- When using the printer driver, the platform is processed with the driver.

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5140

33_5

Feature of the profile

- The Work Space Profile adopts the sRGB color space.
- The following profile update is executed when the following operation or adjustment is executed.

Monitor PF → Changed the profile with the monitor setup
Printer PF → (1) Printer profile calibration
(2) Black balance adjustment/Black balance adjustment (manual)
(3) Initial setup (Black balance adjustment)

Explanation

- The reason that the QSS-32 adopts the sRGB color space is to match the colors of the monitor display and the printed image.

- The place where each profile is stored and the file name

  Flatbed scanner profile (SCN_DIR)

  Profile data for the positive film:S0990100.nkp

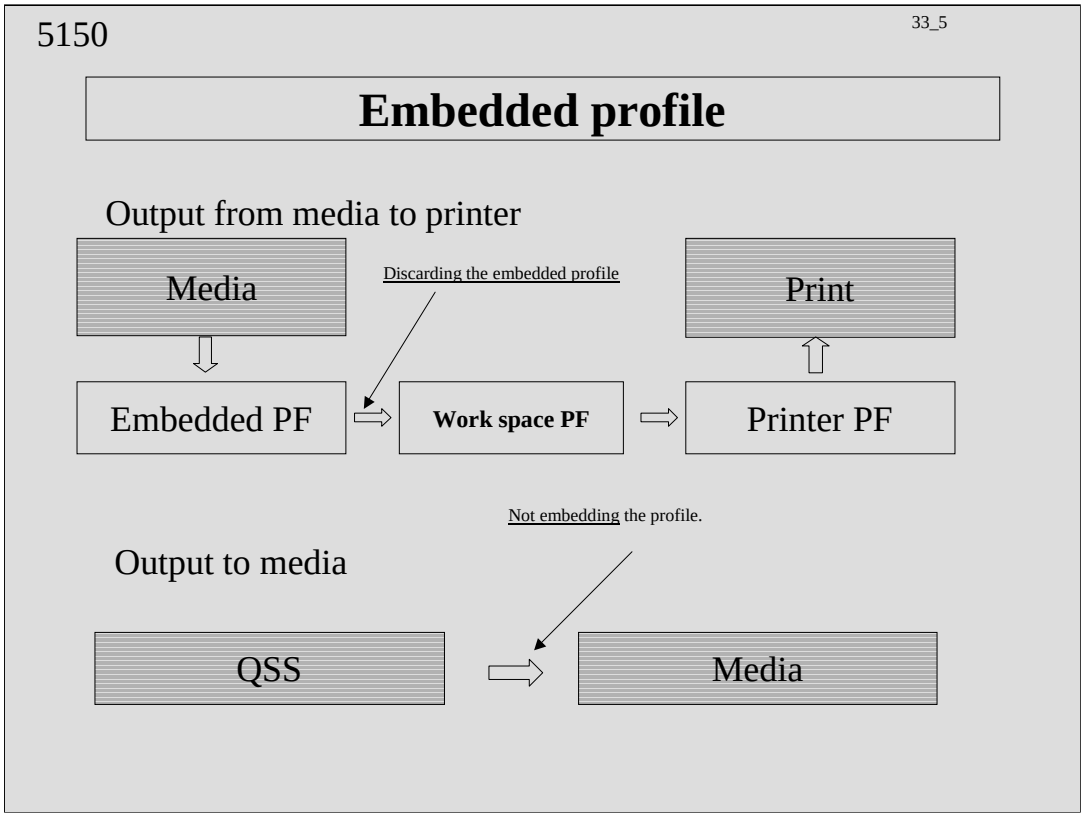
  Flatbed scanner:S1020000.nkp

  Printer profile (PRN_DIR):p112##00.nkp

  ## is different depending on paper types.

  Monitor profile (MONN_DIR):m0020000.nkp

  Working space profile/Input profile (MON_DIR):m0990000.nkp



Explanation

- Send the RGB data only to the work space of the printer to discard the embedded profile even if the profile is embedded to any kind of media.
- Although the QSS-32 does not embed and save the profile in the image file, the work space for saving the image data is sRGB.Therefore, it is necessary to specify the sRGB when opening the data with the application software in the external PC.
- As for the stand alone scanner, when processing the image with sRGB environment, set to [sRGB] of [Master Data] → [Color Management] → [Color Space of Output Media Image].

  Refer to the "Changing the color space (Color Management)" in the S-900SA/S-1700SA Operator's Manual (Additional Operations & Setup Manual).

5900

33_5

Comprehension check

[Setup]

- Do you understand required work before setup?
- Can you execute the Scanner light source upgrading and the Scanner focus adjustment?
- Can you execute the monitor setup?
- Can you execute the initial setup?
- Can you execute the setup of other paper type and paper size?
- Can you set the Print Channel depending on the customers' requests?
- Can you judge which mode is appropriate for adjusting the color balance on the image print and the monitor display?
- Can you explain the procedure of Emulsion number change?

[Question]

- Give a few required works before setup.
- Why is the Scanner focus adjustment required after executing the Scanner light source registration?
- Explain the procedure of monitor setup briefly.
- Explain the flow of initial setup briefly.
- When the other paper type exists, what setup is necessary?
- When the other size paper exists, what setup is necessary?
- Is the interspersed processing (WB and BL) available in the same print size? How is it available?
- A customer said to you “It is necessary to switch [for 16Base] and [for 4Base] for CD burning.”What should you do?
- The software of contact print style photos is installed. How will it be able to make a print?
- All prints from Negative/Positive/Media is yellow.In which mode do you make a correction?
- The main paper of shop is Royal8 89 (1). You are to add the paper Royal8 102 mm.

  Explain the setup procedure briefly.

  After that, the emulsion of Royal8 102 mm paper is changed.Explain the procedure at this time.

33_6

Chapter 6
Mechanical adjustment

Explanation

- There is no additional information.

6000

33_6

The point of this chapter

Key points

- Study the disassembly and adjustment of machine.

  Removing/reattaching each unit, Adjustment of each unit, Screws which should not be loosened

  Maintenance and adjustment, Recovery

Upon completion of the lesson, you will be able to:

- Remove each unit of printer.
- Adjust after replacing the unit.
- Understand the place where should not be adjusted and screws which should not be loosened on site.
- Understand the adjustment method for each section of printer.

How to proceed the training

- Carry out the practical training mainly and explain the cautions, referring to the materials.

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Mechanical adjustment (Scanner section)

Items	Reference
Removing the scanner unit	20610
Removing the LED light source unit	20620
Adjustment after replacing the scanner section	20650

- (1) Scanner unit
  - Impossible to disassemble (If you disassemble it, it is out of warranty.)
  - It is not compatible with the scanner unit of the QSS-28, 29, 30 and 31.
- (2) LED light source unit
  - Impossible to disassemble (If you disassemble it, it is out of warranty.)
  - The LED light source unit can be damaged easily by static electricity, so make sure to use static-dissipative tools when replacing it like PCBs.

Explain, checking the Service Manual.

Explanation

- The allowable range of Swing and Tilt Adjustment and Light Axis Adjustment in the installation is mentioned in the Service Manual [70010].

6025

33_6

Mechanical adjustment of the colorimeter unit

Items	Reference
Replacing the colorimeter and the calibration plate	21110
Adjusting the height of the colorimeter	21120

- (1) Colorimeter unit
  - The calibration plate is built into the colorimeter unit.
  - It is possible to measure the test print without cutting it.
  - When measuring the test print, the test print is pressured with the pressure change solenoid.
  - Not compatible with the colorimeter unit, calibration plate, colorimeter for the QSS-28/29/30/31.
  - The Colorimeter Unit, the Calibration Plate and the Colorimeter for the QSS-32 are compatible with the QSS-33.

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6030

33_6

Mechanical adjustment (Film carrier section)

Items	Reference
Emission lamp and detection sensor position adjustment (135/240 MMC)	35030
Emission lamp and detection sensor position adjustment (135/240 AMC)	35040
MMC auto focus section adjustment	20850
Focus adjustment	37020

Explain, checking the Service Manual.

Explanation

- There is no additional information.

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6030

33_6

Mechanical adjustment (Film carrier section)

① AFC-II

- In some of the sensors, only connector section itself can be replaced. The other sensor should be replaced as a whole of sensor PCB.
- After replacing the 135/240 AMC-II, MMC-II, the focus adjustment for each magnification is necessary for each 135/240 AMC-II or MMC-II to be used.

(2) 135/240 AMC-II, MMC-II

- Explain the position adjustment of AF sensor.
- A adjustment of the worm wheel in the MMC Auto Focus Section(It is not necessary to adjust AMC-II.)
- After replacing the carrier, it is necessary to adjust the focus to the different magnifications depends on the types of the carrier, i.e. the AMC-II or the MMC-II.

Explanation

- There are 2 types of “mount for adjusting the scanner” and “head height adjustment tool” to be used for MMC-II/AMC-II adjustment. (currently used type and initial type)

  The scanner adjustment mount (currently used type) is available for AMC-II/MMC-II.

  The scanner adjustment mount (initial type) is not available for AMC.

  Show both of scanner adjustment mounts.

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6040

33_6

Mechanical adjustment (Magazine section)

Items	Reference
Checking procedure of magazines	22000
Adjusting the paper zigzagging in paper supply unit B	25730

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6050

33_6

Mechanical Adjustment (Paper Supply Unit A and B)

Items	Reference
Removing paper supply unit A	25610
Removal and the right angle adjustment of the cutter unit	25620
Adjusting the paper hold timing of the arm	25630
Adjusting the imprint pressure of the CVP	25640
Removing paper supply unit B	25710
Adjusting the height and the position of the paper supply unit B	25720
Adjusting the paper zigzagging in paper supply unit B	25730

Explain, checking the Service Manual.

Explanation

- There is no additional information.

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6051

33_6

Mechanical Adjustment (Paper Supply Unit A)

(1) Paper supply unit A

- It is almost the same with that of the QSS-30.
- The location of the cutter unit of the QSS-33 is closer to the advance roller than that of the QSS-30 because the paper supply unit A is now compatible with the 82.5mm paper advance length.
- The back side of the paper supply unit A has a printer I/O PCB.
- The paper advance operation of the QSS-33 is different from that of the QSS-30 because the paper supply unit A of the QSS-33 is compatible with the 82.5mm paper advance length**.**

(2) Paper cutter unit

- This is compatible with the cutter unit (QSS-29).

(3) Adjusting the paper hold timing of the arm

- It is almost the same as the "adjusting the paper hold timing of the arm" for the QSS-30.

(3) CVP (Correction Value Print) unit

- Its ink ribbon cassette is the same with the one for the QSS-28/29/30/31/32.

Explanation

- There is no additional information.

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6052

33_6

Mechanical Adjustment (Paper Supply Unit B)

(2) Paper supply unit B

- This unit is almost the same with the paper supply unit of the QSS-30.

(6) Adjusting the height and the position of the paper supply unit B

- It is almost the same as the adjustment of the magazine unit B for the QSS-30

(7) Adjusting the paper zigzagging in paper supply unit B

- It is almost the same as the adjustment of the magazine unit B for the QSS-30

Explanation

- There is no additional information.

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6060

Mechanical adjustment (Exposure advance unit)

Items	Reference
Removing the Exposure advance unit	25810
Adjusting the banding caused in the exposure advance unit	25820

(1) Exposure advance unit

- The Exposure Advance Unit of the QSS-33 is not compatible with that of the QSS-30 because it applies to the 82.5mm paper advance length.
- It is easier to attach and remove the Exposure Advance Unit of the QSS-33 than that of the QSS-30.
- The banding adjustment of the exposure advance unit for the QSS-33 is almost the same with the "Paper pressure operation correction" for the QSS-30 and 32.

Explain, checking the Service Manual.

Note

- Refer to the Service Manual 36090 [Paper Pressure Operation Correction].

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6085

33_6

Mechanical adjustment (Paper Advance Unit)

Items	Reference
Removing the Paper Advance Unit	26610
Removing the processor insertion unit	26630

(9) Paper advance unit

– The Paper Advance Unit for the QSS-33 is largely changed from that of the QSS-30.

(1) Processor insertion unit

– The Processor Insertion Unit for the QSS-33 is almost the same as that of the QSS-30.

Explain, checking the Service Manual.

Explanation

• There is no additional information.

6090

33_6

Mechanical adjustment (Laser unit)

Items	Reference
Removing the laser unit	26710
Laser Unit (location and description of electrical parts)	61450

(1) Laser unit

- Replace the laser unit as a whole unit.
- Impossible to disassemble/adjust the laser unit
- There are two types of the laser unit (Type A1 and B1).
- It is easier to attach and remove the Laser Unit of the QSS-33 than that of the QSS-30.

Explain, checking the Service Manual.

Explanation

- There is no additional information.

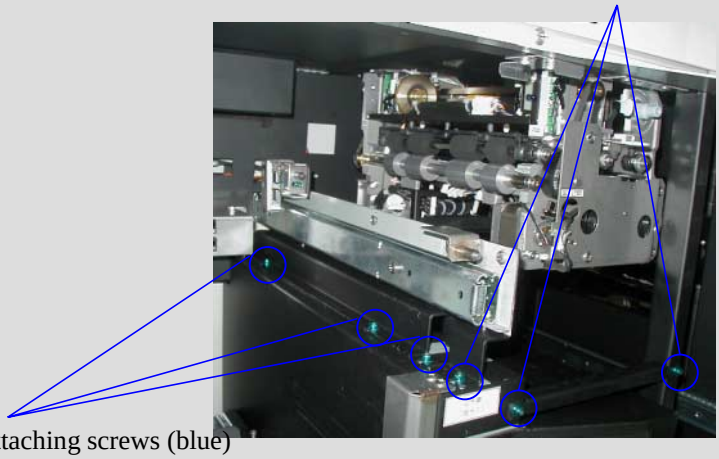
6110

33_6

Screws which should not be loosened

- It is impossible to adjust the attaching screws which are marked with blue on site because it is adjusted with special tools in the factories.Do not loosen the attaching screws which are marked with blue.

(e.g.) Attaching screws (blue)



(e.g.) Attaching screws (blue)

Explanation

- There is no additional information.

6120

33_6

Printer mechanical adjustment

Items	Reference
Paper Sensor Adjustment	36000
Paper Advance Unit Correction	36010
Exposure zoom rate correction	36020
Exposure Position Adjustment	36030
Exposure zoom rate fine adjustment	36040
Paper Advance length Correction	36050
Arm Unit 1 Zigzagging Correction	36060
Exposure center correction	36070
Exposure advance adjustment	36080
Paper Pressure Operation Correction	36090
WB width correction	36100

Explain, checking the Service Manual.

Explanation

- There is no additional information.

6130

33_6

Practical training

- Recovery
- Installing the QSS software
- Installing the profile data
- Installing the driver
- Software upgrading

Explain, checking the PC Service Manual.

Explanation
- The recovery procedure is different depending on the types of PC to be used.
- When the USB-adopted devices (FB scanner, Five slots card reader, etc.) are attached, remove the USB cable to be connected with the PC before executing the recovery.

Note
- Why there is space that is not used in the C drive of the high spec PC after the recovery
- The whole space of the OS drive (C drive) is not used because the PC makers have not tested the operation when the capacity of the drive exceeds its certain capacity level on the Windows 2000.

6140

33_6

Comprehension check

[Disassembly and adjustment of machine]

- Do you understand the cautions in removing/reattaching each unit of printer?
- Do you understand the adjustment procedure after replacing each unit?
- Can you carry out each adjustment in the “Maintenance” mode?
- Did you understand the procedure for the Paper Zigzagging Adjustment?
- Can you identify where the banding is happening?
- Did you understand the logic of banding occurrence in the Exposure Advance Unit?

[Question]

- What is the caution in removing each unit?
- What is the caution in attaching each unit?
- What is the caution when dealing with the Exposure Advance Unit?
- What should you do after replacing laser unit?
- What should you do after replacing the scanner?
- What should you do after replacing the 135/240AFC-II?
- Paper advance lengths of the firstly printed image and the subsequently printed images are different.What should you do?
- The paper is zigzagging.What should you do at first?
- As for the test print for checking the paper zigzagging, the vertical length of the image is different between the left side and right side.At this time, what adjustment is required?
- Regarding the test prints of the Arm Unit Zigzagging Correction mode, the center line location for the first paper is different from that of the second paper.At this time, what adjustment is required?
- Banding is occurring around the area where is approx. 26mm away from the front edge of the paper.At this time, what adjustment is required?

33_7

Chapter 7
Service items

Explanation

- There is no additional information.

7000

33_7

The point of this chapter

Key points

- Study the service items.
  Cautions when replacing PCBs, Image data flow, Outline of advance section and Operation, Errors and countermeasures, Maintenance

Upon completion of the lesson, you will be able to:

- Understand each data flow when printing.
- Understand the cautions when replacing PCBs.
- Understand the paper advance in the paper advance section.
- Understand the maintenance and explain to a customer.
- Understand the parts to be replaced regularly.

How to proceed the training

Explain the items, referring to the training materials and a machine.

Explain the PCBs which are necessary to be replaced with care.

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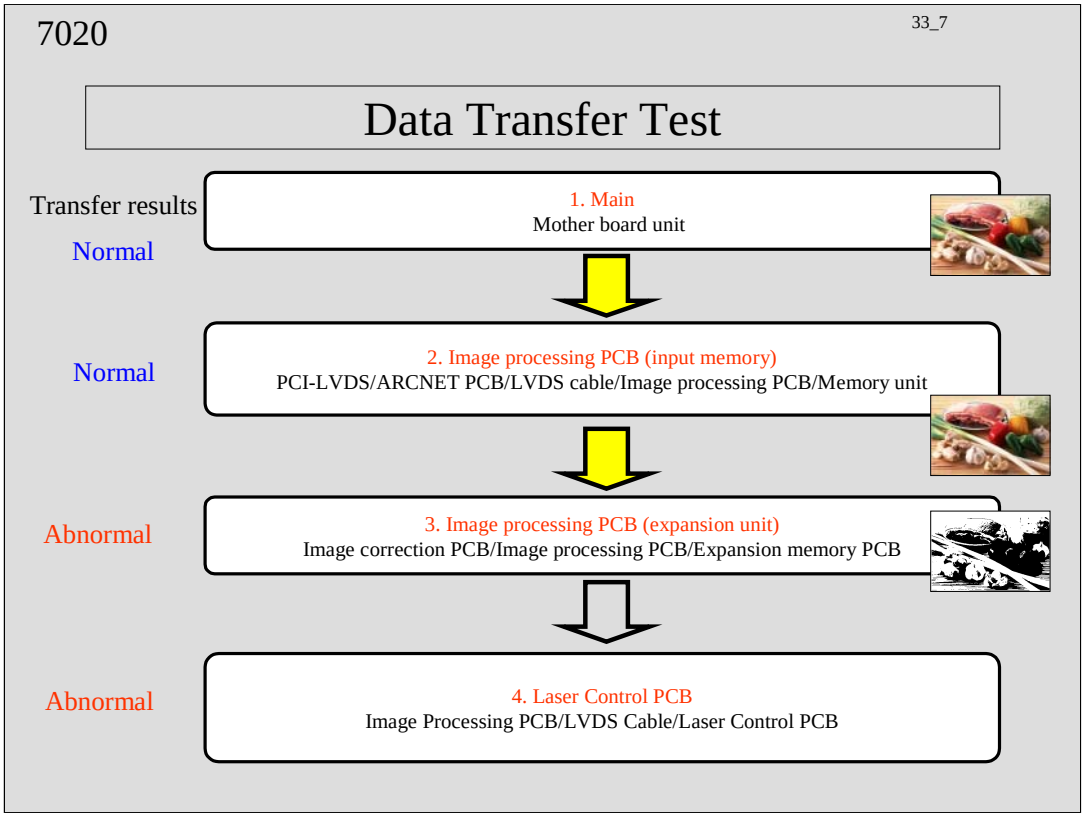
Data flow

Items	Reference
Data flow when printing (Negative/Positive)	50600
Data flow when printing (Media)	50610
Data flow when storing the images	50620
Data flow to the CD-R External Writing System	50630
Data flow to the CAU	50640
Data flow in the image processing PCB	50650
Data flow in the D-ICE PCB	50660

Explain, checking the Service Manual.

Explanation

- There is no additional information.



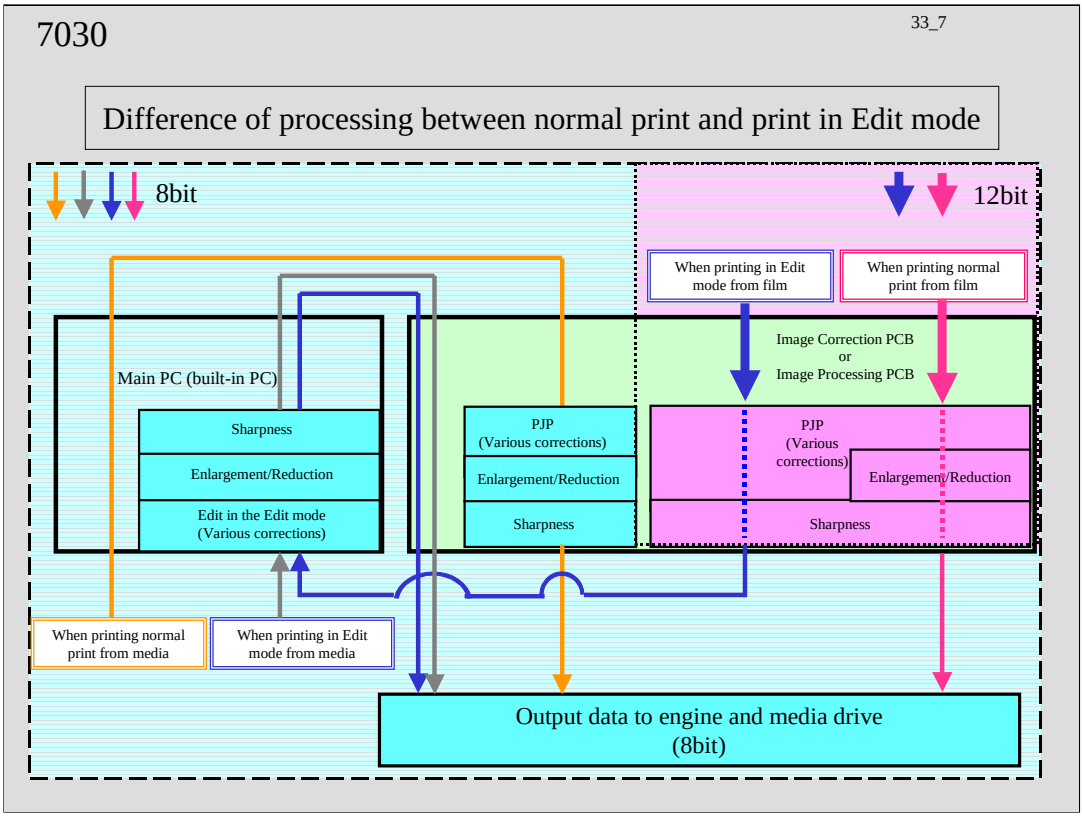
Explanation

- When an abnormal print appears, place around problem part can be defined to some extent by transferring the image data.
- Transfer the data from “1. Main” to “4. Laser control PCB”, check transferred image data in each section, and [Abnormal] is displayed at the place where the problem occurs.

  Refer to the Service Manual 35900.
- When an abnormal print appears even though all transfer results are [Normal], check around the laser unit section.

Note

- This mode is effective only when an abnormal print appears in spite of an error having not occurred.



Explanation

Color and density, DSA

- [Normal print from film]
  Each correction in PJP is processed in 12 bit data. After PJP processing, 8 bit data is made as an output data.
- [Print in the Edit mode from film]
  Each correction is processed in 12 bit when selecting an image, but it is processed in 8 bit after it is taken in the Edit screen.
- When making each correction in 12 bit data and making each correction in 8 bit data, the data will be different even if same correction is done.
- When making each correction in 12 bit data, it is possible to get greater data as compared to 8 bit data. In Edit mode, it is recommended to make a correction when selecting an image.

  As for sharpness, however, refer to the following one.

Sharpness

- [Normal print from film]
  The data is enlarged and reduced for print sizes and the sharpness is corrected optimally.
- [Print in the Edit mode from film]
  The data is not enlarged and reduced, and the data of which the sharpness correction is done is outputted to the built-in PC.

  The data which is taken in PC is enlarged and reduced for print sizes and the sharpness correction is done again. So, there is a slight difference between the output data of [Normal print from film] and [Print in the Edit mode from film] even if various corrections are not done.
- Output data of [Normal print from film] and [Print in the Edit mode from film] is adjusted as a default so that they look like same on a print. But, there are differences among individuals depending on a person who looks a print. To reduce the difference, adjust with Sharpness in Edit display.

  This is why the data will be greater if sharpness correction is done after the data is enlarged and reduced.

Note

- Each correction is processed with the image correction PCB in the QSS-28,29,31 and with the image processing PCB in the QSS-30.

7050

33_7

Cautions when replacing PCBs (Scanner section)

PCB	D	J	S	B	V	Others
AFC/scanner control PCB	1	-	1	1	-	The sensor standard adjustment of each AFC, MMC, and AMC
LED driver PCB	-	-	-	-	-	LED Light Source Kit 1 or LED Light Source Kit 2 may be necessary when replacing one LED driver to the other LED drivers (Refer to the 65020 in the Service Manual for more details).

D:DIP switch setting (Set it as same as before replacing.)
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.

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Cautions when replacing PCBs 1 (Printer Section)

PCB	D	J	S	B	V	Others
Image processing PCB	1	-	1	-	-	
Image correction PCB	1	-	1	-	-	
D-ICE control PCB	1	-	1	1	-	
D-ICE PCB	1	-	1	-	-	
Colorimeter control PCB	1	-	1	1	-	“Paper front end advance length correction” and “paper feed error correction” in the “Colorimeter unit adjustment”.

D:DIP switch setting (Set it as same as before replacing.)
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.

7061

33_7

Cautions when replacing PCBs 2 (Printer Section)

PCB	D	J	S	B	V	Others
Printer control PCB	1	-	1	1	-	Paper Sensor Adjustment
Laser control PCB	1	-	1	-	-	
B, G, R-AOM driver	-	-	-	-	-	Initial setup

D:DIP switch setting

J:Confirming the connector for the jumper (Set it as same as before replacing).

S:Reading the System program.

B: Reading the backup data

V:Necessary to adjust the potentiometer

1:Execute

- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.

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Cautions when replacing PCBs (Processor section)

PCB	D	J	S	B	V	Others
Processor control PCB	1	1	1	1	-	
SM I/O PCB	-	-	-	-	1	Sensor sensitivity adjustment for replenisher solution sensor

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.

7080

33_7

Cautions when replacing PCBs (Options)

PCB	D	J	S	B	V	Others
PU control PCB	1	-	1	1	-	

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.

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7090

33_7

Cautions when replacing PCBs (Personal computers)

PCB	D	J	S	B	V	Others
ATX mother board		1	-	-	-	BIOS setting
Hard disk drive	-	1	1	1	-	Recovery
RAID Card	-	-	-	-	-	RAID card setting

For details, refer to the PC Manual.

D:DIP switch setting
J:Confirming the connector for the jumper (Set it as same as before replacing).
S:Reading the System program.
B: Reading the backup data
V:Necessary to adjust the potentiometer

1:Execute
- :Not execute

Note

- The PCBs mentioned in the Slide are the PCBs that need to be replaced with care.
- RAID card is compatible only with the high spec PC.

7100

33_7

Errors and countermeasures

- Film jam
- Paper jam

Explanation

- There is no additional information.

7110

33_7

Maintenance

Service Manual 80110

- Time to replace
- Cleaning the drives

  Regular cleaning with MO head cleaner (dirt of lens)

  When using an optional MO, recommend to purchase the MO head cleaner (option: I090374) and clean regularly (every three months).

Explanation

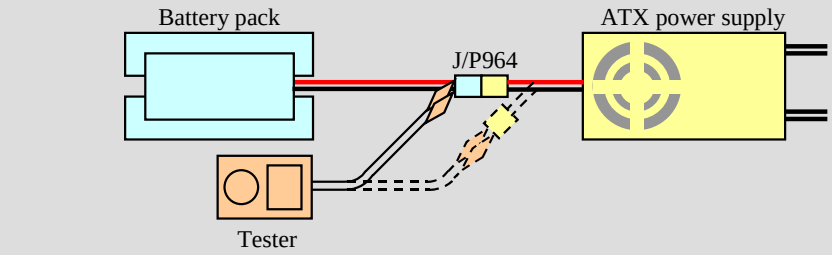
- Cleaning of MO drive by MO head cleaner prevents writing/reading error caused by the dirt of lens.

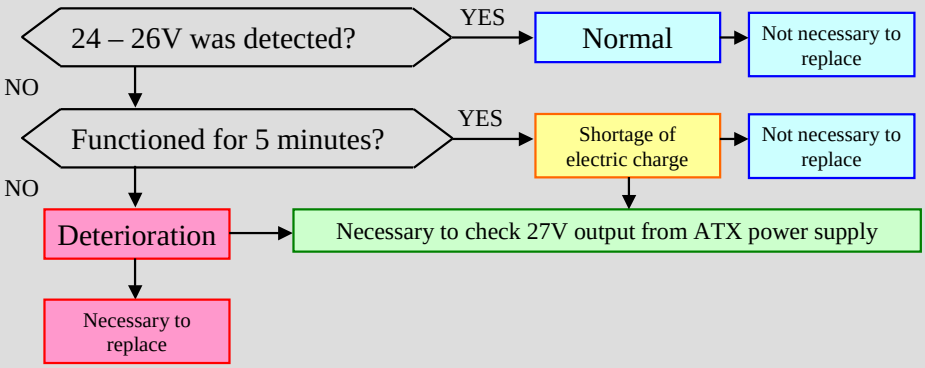
  Perform the cleaning except when processing in the QSS system.

7125

33_7

How to check the voltage of battery pack (for the standard PC and the high spec PC)





Explanation

- There is no additional information.

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7140

33_7

Paper loading operation of the printer section

Items	Reference
Paper path diagram	55000
Paper Loading Operation	55100
Paper Advance Operation (before exposure)	55200
Exposure Operation	55300
Paper Advance Operation (after the exposure: lane is not selected) Paper Advance Operation (after the exposure: lane is selected)	55400
Paper rewind operation	55500
Paper splicing operation	55600
Paper end operation	55700
Fogged paper operation	55800

Explain, checking the Service Manual.

Explanation

- There is no additional information.

7150

33_7

Comprehension check

[Service items]

- Do you understand the image data flow both when printing from negative or positive films and when printing from the media.
- Do you understand which adjustment/setting is required after replacing a PCB?
- Do you understand how to clean the surface of laser?
- Do you understand how to clean the rollers inside of printer?
- Do you understand the cleaning method for a calibration plate of the colorimeter?

[Question]

- Which PCB does the scanned image data go through before being outputted?
- What is the replacing procedure of PCBs below?

  Image processing PCB

  DIGITAL ICE PCB
- When cleaning the surface of laser, do you use the alcohol? Wipe with water? Wipe with a dry cloth?
- When cleaning the rollers inside of the printer, can you use alcohol?
- Can you use alcohol when cleaning a calibration plate of the colorimeter?

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QSS-33 Training Material

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